THOMSON 29DF42E

MODEL

SERVICE MANUAL

SERVICE POSITION - POSITION SERVICE - SERVICESTELLUNG - POSIZIONE SERVIZIO - POSICIÓN SERVICIO

A - CHASSIS - CHASIS

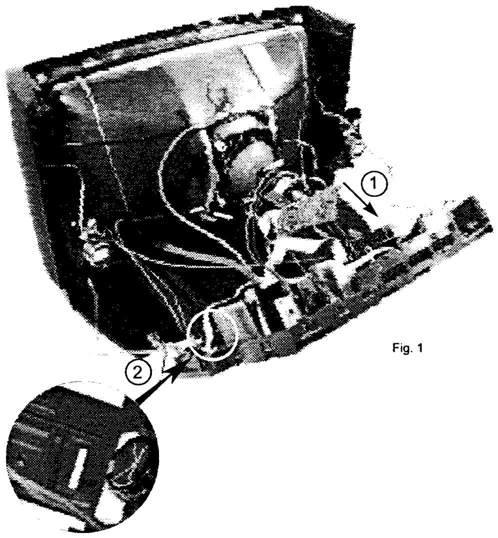


Fig. 1

1- Raise lightly the chassis, pull it (1) up to an intermediate position to get free.
2- Tip the chassis and insert the small tongue (2) in extremity of the maintain rail to fix the chassis in service position (Fig.1).

1- Soulever légèrement le chassis et le tirer (1) jusqu'à une position intermédiaire pour le dégager.
2- Basculer le chassis et engager les languettes (2) en extémité des réglettes de maintien pour fixer le chassis en position de service (Fig.1).

1- Heben Sie das Chassis leicht an und ziehen es nach hinten halb heraus. Heben Sie das Chassis aus den Führungsschienen.
2- Kippen Sie das Chassis und hängen es mit den Laschen (2) am Chassisrahmen in die sich am Ende der Führungsschienen befindlichen Ösen (Fig.1) ein.

1- Sollevare leggermente il telaio e tirarlo (1) fino ad una posizione intermedia per poterlo estrarre.
2- Inclinare e inserire le linguette (2) nelle apposite guide per mantenere il telaio fisso nella posizione service(Fig.1)

1- Alzar ligeramente el chasis, y dejarlo en una posición intermedia (1)
2- Bascular el chasis e insertar las lengüetas (2) en los extremos, para mantener el chasis fijo en la posición de servicio (Fig. 1).

B - POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

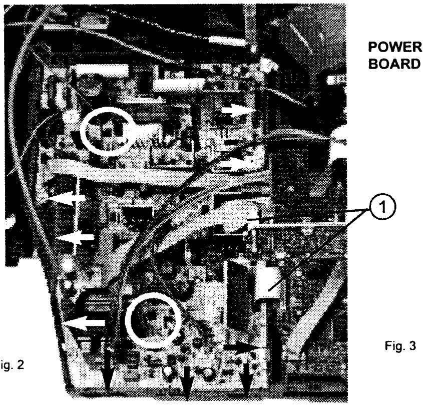


Fig. 2

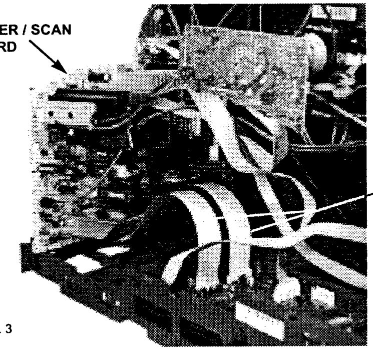


Fig. 3

1 - Remove the two connection cable PSB/SSB (1) (Fig.2) and get free the "PSB" board from the chassis in pressing the maintain tongue (9 in periphery and 2 in the board) (Fig.2) . Put the two extension cable PSB/SSB (35120540) (Fig.3).
2 - Put the PSB board in service position (Fig. 3)

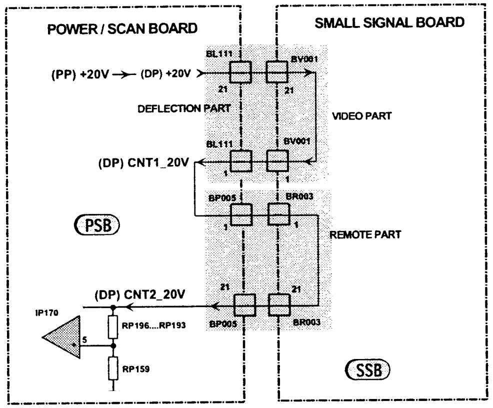
1 - Retirer les cordons de raccordement PSB/SSB (1) (Fig.2) et dégager la platine "PSB" du chassis en appuyant sur les languettes de maintien (9 en périphérie et 2 en interne) (Fig.2) . Mettre les cordons prolongateurs de raccordement PSB/SSB (35120540) (Fig.3).
2 - Mettre la platine PSB en position de service (Fig. 3)

1 - Entfernen Sie die beiden Verbindungskabel PSB/SSB (1) (Fig.2). Zum Ausbau der PSB-Platine lösen Sie die 9 Halteklammern um die Platine herum und die 2 Klammern in der Platine wie (Fig.2) dargestellt. Stecken Sie die Verlängerungskabel PSB/SSB (35120540) (Fig.3) ein.
2 - Bringen Sie die PSB-Platine in die Service-Position (Fig. 3).

1 - Togliere idue cavi di collegamento PSB/SSB (1) (Fig.2) e liberare la piastra "PSB" dal telaio premendo le linguetto di fissaggio (9 periferiche e due interne) collegare le prolunghe PSB/SSB (35120540) (Fig.3).
2 - Sistemare la piastra PSB in posizione di service (Fig. 3).

1 – Retirar los dos cables de conexión PSB/SSB (1) (Fig.2) y soltar la placa "PSB" del chasis presionando las lengüetas (9 en la periferia y 2 en la placa) *(Fig. 2). Enchufar los dos cables prolongadores PSB/SSB (35120540) (Fig.3).*
2 – Poner la placa PSB en la posición de servicio (Fig. 3)

CONNECTING SAFETY POWER BOARD / SIGNAL BOARD
SECURITE DE CONNEXION PLATINES PUISSANCE / PETITS SIGNAUX
VERBINDER ZWISCHEN NETZTEIL/ABLENK-PLATINE UND SIGNAL-PLATINE
COLLEGAMENTI DI SICUREZZA DELLA PIASTRA POTENZA/PIASTRA SEGNALI
CONEXIONES DE LA SEGURIDAD ENTRE LA PLACA ALIMENTACIÓN / SEÑAL



GB

The **20V** voltage which is fed in a loop **CNT1_20V => CNT2_20V** through the connectors going to the signal processing boarder in order to insure a good connection between both boards and to protect the **PSB** and the **SSB** boards :
CNT1_20V => safety of the sheet BL111 / BV001
CNT2_20V => safety of the sheet BP005 / BR003
If one of these voltage does not exist (20V comprise) the IP170 output will be 0 and the phototransistor IP070 is blocked and the set will be in standby.

F

Le cheminement de la tension **20V** par la platine petits signaux est effectué sous forme de boucle **CNT1_20V => CNT2_20V** afin de protéger les platines **PSB et SSB** en cas de mauvaise connexion des nappes BR003 et BV003.
CNT1_20V => sécurité de la nappe BL111 / BV001
CNT2_20V => sécurité de la nappe BP005 / BR003.
Si l'une de ces tensions (20V inclu) n'est pas présente la sortie de IP170 passe à 0 entraînant le blocage du phototransistor IP070 et par suite le passage en standby.

D

Um die **PSB**- und die **SSB**-Platinen zu schützen und um eine sichere Betriebsspannungsversorgung dieser Platinen zu gewährleisten, ist die **+20V-Versorgungsschiene (CNT1_20V => CNT2_20V)** über die Verbinder BV001 und BR003 durchgeschleift.
CNT1_20V => Schutz über Flachbandkabel BL111 / BV001
CNT2_20V => Schutz über Flachbandkabel BP005 / BR003
Sollte eine dieser Betriebspannungen fehlen, wird der Ausgang des IC IP170 (Pin 7) 0V, der Fototransistor im Optokoppler IP070 sperrt und das Gerät schaltet in Standby.

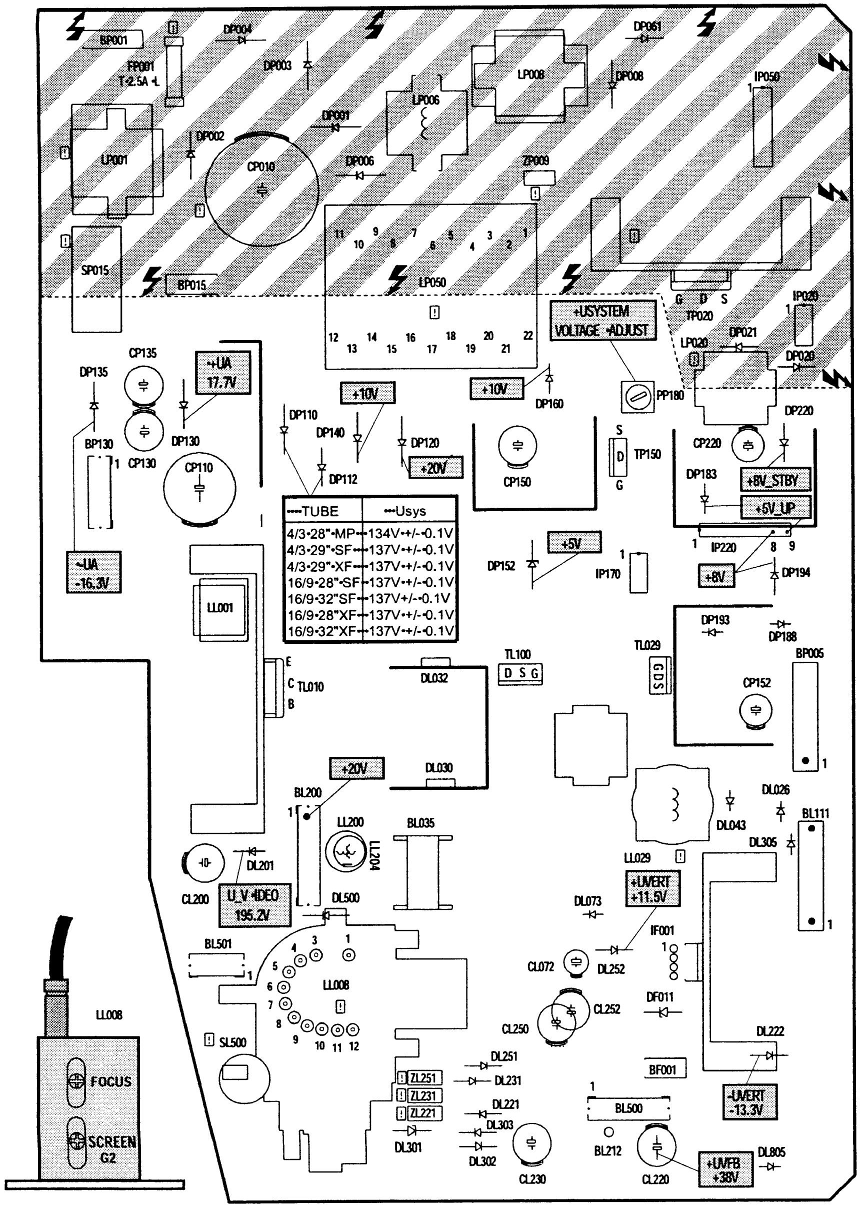
I

L'alimentazione di **20V** alla piastra elaborazione segnali viene fornita dai connettori **CNT1_20V => CNT2_20V** in modo da assicurare une protezione delle piastre **PSB** e **SSB** nel caso che si manifesta se un cattivo collegamento.
CNT1_20V => protezione BL111 / BV001
CNT2_20V => protezione BP005 / BR003
Se una di queste tensioni 20V non fosse presente l'uscita di IP170 passa a 0V determinando il blocco del phototransistor IP070 e il successivo passaggio in standby.

E

El recorrido de la tensión de **20V** por la placa SSB se efectúa en forma de bucle **CNT1_20V => CNT2_20V** con el fin de proteger las placas **PSB** y **SSB** en el caso de un fallo de los conectores
CNT1_20V => seguridad del mazo BL111 / BV001
CNT2_20V => seguridad del mazo BP005 / BR003
Si una de estas tensiones faltan (incluidos los 20 V), la salida de IP70 será 0, el fototransistor IP070 se bloquea y el TV pasará a Standby (modo espera)

LOCATION OF CONTROLS - EMPLACEMENT DES REGLAGES - SERVICE-LAGEPLAN - POSIZIONE REGULATORI DI SERVIZIO - SITUACIÓN DE LOS AJUSTES



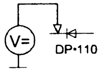
BP001
FP001
T 2.5A L
DP004
DP003
DP001
DP061
DP008
LP008
LP006
IP050
LP001
DP002
CP010
DP006
ZP009
SP015
BP015
LP050
+USYSTEM VOLTAGE ADJUST
G D S
TP020
IP020
LP020
DP021
DP020
DP220
PP180
CP135
DP135
+UA 17.7V
BP130
CP130
DP130
CP110
-UA -16.3V
DP110
DP140
DP112
DP120
+10V
+10V
+20V
DP160
CP150
S D G
TP150
CP220
DP183
+8V_STBY
+5V_UP
+5V
DP152
IP170
IP220
+8V
DP194
DP193
DP188
TL029
G D S
BP005
CP152
LL001
E C B
TL010
DL032
TL100
D S G
+20V
DL030
BL200
LL200
LL204
BL035
DL026
BL111
DL043
DL305
CL200
DL201
U_VIDEO 195.2V
DL500
LL029
+UVERT +11.5V
DL073
IF001
BL501
LL008
SL500
CL072
DL252
CL252
DF011
CL250
DL222
DL251
DL231
ZL251
ZL231
ZL221
DL221
DL303
DL301
DL302
BF001
BL500
BL212
-UVERT -13.3V
CL230
CL220
+UVFB +38V
DL805
FOCUS
SCREEN G2

TUBE	Usys
4/3 28" MP	134V +/- 0.1V
4/3 29" SF	137V +/- 0.1V
4/3 29" XF	137V +/- 0.1V
16/9 28" SF	137V +/- 0.1V
16/9 32"SF	137V+/- 0.1V
16/9 28"XF	137V +/- 0.1V
16/9 32"XF	137V +/- 0.1V

▨ Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chasis conectada a la red

⚠ Use isolating mains transformer
Utiliser un transformateur isolateur du secteur
Trenntrafo verwenden
Utilizar un transformador aislador de red
Utilizzare un transformatore per isolarvi dalla rete

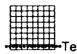
ADJUSTMENTS - REGLAGES - EINSTELLUNGEN - REGOLAZIONE - AJUSTES

<table>
<tr><td>U Sys</td><td>PP180</td><td>Standard TV Settings:
☼ + ◑ + ◐ =50%
TV to AV1: Black test pattern</td><td>
DP 110</td><td>
<table>
<tr><th>TUBE NAME</th><th>DESCRIPTION</th><th>Usys jumper</th><th>Usys</th></tr>
<tr><td>A66EHJ 43X12</td><td>4/3 28" MP</td><td>JP912</td><td>134V +/- 0.1V</td></tr>
<tr><td>A68EGD038X322</td><td>4/3 29" SF</td><td>JP912</td><td>137V +/- 0.1V</td></tr>
<tr><td>A68EJZ011X121</td><td>4/3 29" XF</td><td>JP912</td><td>137V +/- 0.1V</td></tr>
<tr><td>W66EGV023X522</td><td>16/9 28" SF</td><td>JP912</td><td>137V +/- 0.1V</td></tr>
<tr><td>W76EGV023X522</td><td>16/9 32"SF</td><td>JP912</td><td>137V+/- 0.1V</td></tr>
<tr><td>W66EJY011X121</td><td>16/9 28"XF</td><td>JP912</td><td>137V +/- 0.1V</td></tr>
<tr><td>W76EJY011X121</td><td>16/9 32"XF</td><td>JP912</td><td>137V +/- 0.1V</td></tr>
</table>
</td></tr>
<tr><td>U G2
SERVICE MODE</td><td>SERVICE MODE
G2 potentiometer:
SCREEN</td><td colspan="3">- Select and enable the "G2 Alignment" item in VIDEO menu of the Service Mode : the displayed will change to a full black OSD screen.
The following adjustment is best carried in semi-darkness:
- Adjust the SCREEN potentiometer (LL008) so that the retrace lines are just visible.
- Now carefully adjust the SCREEN potentiometer until the retrace lines just become invisible.
- Press any RCU key to leave the G2 alignment.
Note: If the G2 value is set too low, the chassis will display error code 26 (tube does not get warm in time).

- Sélectionner et valider le réglage "G2 Alignment" dans le menu Vidéo de Service Mode: l'écran devient totalement noir.
En obscurité:
- Régler le potentiomètre "SCREEN" (LL008) pour apercevoir le retour des lignes.
- Régler ensuite le potentiomètre "SCREEN" pour rendre juste invisible les lignes de retour.
- Appuyer sur une des touches de la télécommande utilisateur pour sortir du mode G2 Alignment.
Note : En cas de réglage G2 trop faible le chassis passe en code panne 26 (absence de l'information tube chaud.

- Wählen Sie im Service-Mode im Menü VIDEO die Funktion "G2 Alignment" an: der Bildschirm wird schwarz. Die folgenden Einstellungen sollten in einem abgedunkelten Raum vorgenommen werden.
- Stellen Sie den Einsteller SCREEN (am DST LL008) so ein, dass Rücklaufstreifen sichtbar werden.
- Stellen Sie den Einsteller SCREEN so ein, dass die Rücklaufstreifen gerade unsichtbar werden.
- Drücken Sie irgendeine Taste auf der Fernbedienung um den G2-Abgleich zu verlassen.
Achtung: Wenn die Schirmgitter- (G2-) Einstellung zu niedrig ist, kann der Fehlercode 26 (Bildrohr nicht rechtzeitig aufjeheizt) angezeigt werden.

Selezionare e abilitare"G2 Alignment" interno al menu VIDEO del Service Mode: Verrà visualizzato uno schermo nero.
In condizione con ambiente scuro.
Regolare il potenziometro SCREEN (LL08) per rendere visibili le ritracce sullo schermo
Regolare il potenziometro SCREEN per eliminare le ritracce sullo schermo
Premere un tasto del tecomando per abbandonare G2 alignment.
NOTA: se la regolazione della tensione G2 è tropppo bassa il telaio visualizzerà il codice 26(il tubo non raggiunge la temperatura nel tempo richiesto)

- Seleccionar y validar la línea del "ajuste G2" en el menú VIDEO del Modo Servicio : La pantalla se pondrá oscura y el OSD pasará a color negro.
Cuando esté oscura:
- Ajustar el potenciómetro SCREEN (LL008) hasta hacer visibles las líneas de retrazado.
- Ajustar el potenciómetro SCREEN justo, hasta hacer invisibles las líneas de retrazado.
- Pulsar cualquier tecla del telemando para salir del ajuste de G2.
Nota: Si el valor del ajuste de G2 es muy bajo, el chasis puede indicar el código de error 26 (TRC no se calienta en el tiempo establecido)</td></tr>
<tr><td>FOCUS</td><td>FOCUS</td><td>
Test pattern
(standard values)</td><td> </td><td>Sharp picture</td></tr>
</table>

I - ENTER/EXIT SERVICE MODE - ENTREE/SORTIE DU MODE SERVICE - EIN-AUSTIEG SERVICE MODE - ACCESSO/USCITA ALLA/DALLA FUNZIONE - ENTRADA/SALIDA MODO SERVICIO

SERVICE MODE (GB)

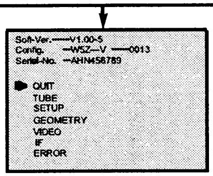
1 ACCESSING SERVICE MODE

TV Control Panel Access

Switch the TV into "**Standby**" mode by pressing the Standby button on the RCU. Wait till the TV goes into the standby.

Press the **VOL-** button and then the **PR-** button on the TV keyboard. Hold them down for more than 8 seconds.

After the normal switch on time, when the 8 seconds have elapsed, the main service menu appears on the screen.



```
Soft-Ver.   V1.00-5
Config.     W5Z—V   0013
Serial-No.  AHN456789

▶ QUIT
  TUBE
  SETUP
  GEOMETRY
  VIDEO
  IF
  ERROR
```

Note :

In service mode :

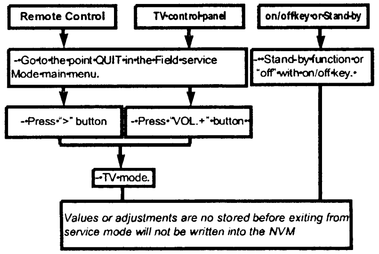
- *The child lock function is re-initialized*
- *Clear any wake-up/sleep timers*
- *Pin 8 of the scart plug has to be ignored.*
- *AV- Link WSS detection and letterbox detection (autoformat) have to be disabled.*
- *Automatic standby functions, in case of no antenna signal have to be disabled.*
- *Sharpness : middle (nominal)*
- *Install Mode disabled.*
- *Default format and zoom.*
- *The Chassis Variant will be checked and stored.*

2 TEMPORARY EXIT FROM SERVICE MODE

- Press Exit on the Remote control.
- Everyday use menu can be accessed via Menu button. (Text and EPG not available)

- Field Service Menu can be re-entrered via Blue button.

3 EXITING FROM SERVICE MODE



Remote Control — **TV control panel**

- Go to the point QUIT in the Field service Mode main menu.

- Press ">" button — - Press "VOL.+" button

- TV mode.

on/offkey or Stand-by

- Stand-by function or "off" with on/off key.

Values or adjustments are no stored before exiting from service mode will not be written into the NVM

MODE SERVICE (F)

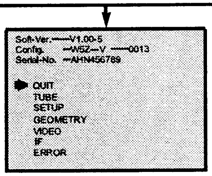
1 ACCES AU MODE SERVICE

Accès avec le clavier du téléviseur

Mettre le téléviseur en position "**veille**" avec la télécommande utilisateur.

Appuyer sur la touche **VOL-** puis sur la touche **PR-** du clavier du téléviseur.
Maintenir enfoncées ces touches ensemble plus de 8 secondes.

Après le temps normal de mise en fonctionnement et lorsque les 8 secondes sont écoulées, le menu principal du Mode Service apparaît.



```
Soft-Ver.   V1.00-5
Config.     W5Z—V   0013
Serial-No.  AHN456789

▶ QUIT
  TUBE
  SETUP
  GEOMETRY
  VIDEO
  IF
  ERROR
```

Note :

En mode service:

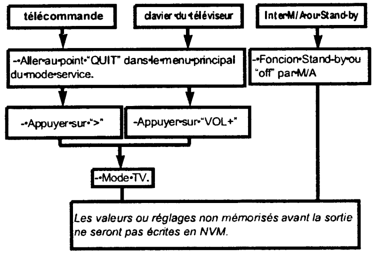
- *Le verrouillage parental est effacé (réinitialisé).*
- *La programmation des heures "reveillmatin" est annulée.*
- *Pin 8 de la prise SCART ignorée.*
- *AV- Link , la détection WSS et la détection letterbox ne sont pas validées.*
- *La fonction de veille automatique en cas d'absence de signal d'antenne n'est pas validée.*
- *Le contour est appelé à sa valeur moyenne.*
- *Le mode d'installation n'est pas pas valide.*
- *Zoom et format ignorés.*
- *Le type de chassis est contrôlé et mémorisé.*

2 SORTIE TEMPORAIRE DU MODE SERVICE

- Utiliser la touche Exit de la télécommande.
- Le menu utilisateur peut être accessible via la touche "Menu". (Télétexte et EPG non valides).

- Pour entrer à nouveau dans le mode service utiliser la touche bleue.

3 SORTIE DEFINITIVE DU MODE SERVICE



télécommande — **clavier du téléviseur**

- Aller au point "QUIT" dans le menu principal du mode service.

- Appuyer sur ">" — -Appuyer sur "VOL+"

- Mode TV.

Inter M/A ou Stand-by

- Foncion Stand-by ou "off" par M/A

Les valeurs ou réglages non mémorisés avant la sortie ne seront pas écrites en NVM.

SERVICE MODE (D)

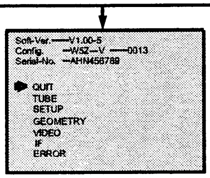
1 EINSTIEG IN DEN SERVICE MODE

Zugriff über die Tastatur des Fernsehgeräts

Schalten Sie das Gerät mit der Fernbedienung in **Standby**.

Drücken Sie die **VOL-** Taste und dann die **PR-** Taste am Nahbedienteil des Gerätes. Halten Sie beide Tasten für länger als 8 Sekunden gedrückt.

Nach der normalen Einschaltzeit erscheint auf dem Bildschirm das Menü des Service-Modes.



```
Soft-Ver.   V1.00-5
Config.     W5Z—V   0013
Serial-No.  AHN456789

▶ QUIT
  TUBE
  SETUP
  GEOMETRY
  VIDEO
  IF
  ERROR
```

Anmerkung :

Im SERVICE MODE :

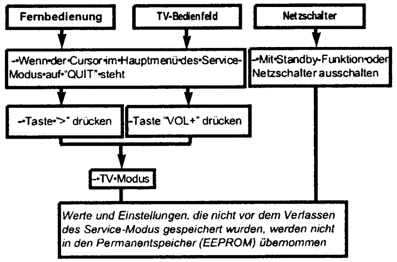
- *wird die Kindersicherung gelöscht.*
- *werden alle Ein- und Ausschaltzeitgeber gelöscht.*
- *wird die SCART - Schaltspannung nicht ausgewertet.*
- *AV- Link WSS Detektion and Letterbox Detektion (Autoformat) sind abgeschaltet.*
- *wird die Automatische Abschaltung bei fehlendem Antennensignal gesperrt.*
- *wird die Bildschärfe auf Mittelstellung (nominal) gesetzt.*
- *wird der Installations-Modus gesperrt.*
- *wird das Standardformat bzw. der Standard-Zoom-modus gewählt.*
- *die Chassis-Variante wird überprüft und gespeichert.*

2 VORÜBERGEHENDES VERLASSEN DES SERVICE MODE

- Auf der Fernbedienung EXIT drücken.
- Mit der Taste Menü gelangen Sie zum Menü "Übersicht". (Videotext und EPG sind nicht verfügbar).

- Mit der blauen Taste gelangen sie zurück in den Service-Mode.

3 ENDGÜLTIGES VERLASSEN DES SERVICE MODES



Fernbedienung — **TV-Bedienfeld**

- Wenn der Cursor im Hauptmenü des Service-Modus auf "QUIT" steht

- Taste ">" drücken — -Taste "VOL+" drücken

- TV Modus

Netzschalter

- Mit Standby-Funktion oder Netzschalter ausschalten

Werte und Einstellungen, die nicht vor dem Verlassen des Service-Modus gespeichert wurden, werden nicht in den Permanentspeicher (EEPROM) übernommen

SERVICE MODE (I)

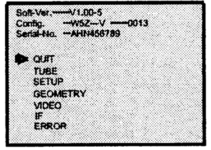
1 ACCESSO AL SERVICE MODE

tramite i comandi del televisore

Posizionare il TV nel modo "**Standby**" usando il tasto standby del telecomando. Attendere che il TV si posizioni in standby.

Premere prima il tasto **VOL-** e poi il tasto **PR-** sulla tastiera del TV.
Mantenere premuto i due tasti per più di 8 secondi.

Dopo circa 8 secondi il TV si accenderà mostrando sullo schermo il menu service.



```
Soft-Ver.   V1.00-5
Config.     W5Z—V   0013
Serial-No.  AHN456789

▶ QUIT
  TUBE
  SETUP
  GEOMETRY
  VIDEO
  IF
  ERROR
```

Nota :

Nel service mode:

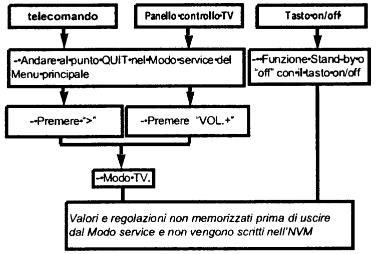
- *La funzione Blocco Bambini è reinizializzata.*
- *La programmazione sveglia è cancellata.*
- *Il piedino 8 della scart è ignorato.*
- *La rilevazione AV-Link WSS e rilevazione letterbox (formato) è statà disabilitata.*
- *Funzione automatica di standby, nel caso di mancanza del segnale d'antenna è disabilitata.*
- *Nitidezza: media (nominale)*
- *Il Modo Install disabilitato.*
- *Formato ignorati e zoom.*
- *Le varianti del telaio verranno controllate e memorizzate.*

2 USCITA TEMPORANEA DAL SERVICE MODE

- Premere Exit sul telecomando.
- Al menu di uso quotidiano si accede attraverso il pulsante Menu. (Text and EPG disabilitati).

- É possibile rientrate nel Menu Service tramite il pulsante Blue.

3 USCIRE DAL SERVICE MODE



telecomando — **Panello controllo TV**

- Andare al punto QUIT nel Modo service del Menu principale

- Premere ">" — - Premere "VOL.+"

- Modo TV.

Tasto on/off

- Funzione Stand-by o "off" con il tasto on/off

Valori e regolazioni non memorizzati prima di uscire dal Modo service e non vengono scritti nell'NVM

MODO SERVICIO (E)

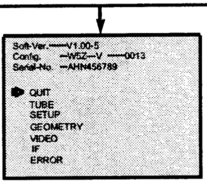
1 ACCESO AL MODO SERVICIO

Acceso panel control TV

Con el TV encendido, apagarlo con la tecla "**Standby**" del telemando. Asegurarse de que el aparato ha pasado a "Standby".

Pulsar primero, la tecla VOL- y después PR- del teclado del TV.
Mantenerlas pulsadas al mismo tiempo durante unos 8 segundos

Después del arranque normal, cuando hayan pasado los 8 segundos, aparecerá el menú principal del Modo Servicio



```
Soft-Ver.   V1.00-5
Config.     W5Z—V   0013
Serial-No.  AHN456789

▶ QUIT
  TUBE
  SETUP
  GEOMETRY
  VIDEO
  IF
  ERROR
```

Nota :

En modo servicio:

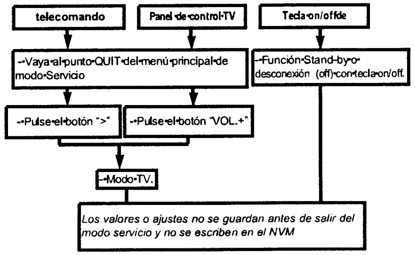
- *La función "Bloqueo niños" es reinicializada.*
- *Anula todos las horas programadas*
- *La patilla 8 del SCART es ignorada*
- *La detección de AV- Link, WSS y "modo buzón" (autoformato) se desactiva.*
- *El apagado automático en caso de ausencia de señal de antena es desactivado.*
- *la nitidez es puesta al punto medio.*
- *El Modo Instalación es desactivado.*
- *Zoom y formato ignorados.*
- *El tipo de chasis será comprobado y memorizado.*

2 SALIDA TEMPORAL DEL MODO SERVICIO

- Pulse Salir en el mando a distancia
- Con el botón Menu puede acceder al menú de uso cotidiano. (Teletexto y EPG no disponibles).

- Puede entrar al Menú Servicio con el botón azul.

3 SALIDA DEL MODO SERVICIO



telecomando — **Panel de control TV**

- Vaya al punto QUIT del menú principal de modo Servicio

- Pulse el botón ">" — - Pulse el botón "VOL.+"

- Modo TV.

Tecla on/offde

- Función Stand-by o desconexión (off) con tecla on/off.

Los valores o ajustes no se guardan antes de salir del modo servicio y no se escriben en el NVM

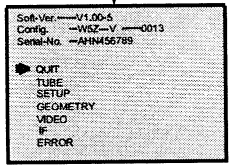
MODO SERVICIO (E)

O SERVICIO

1 ACCESO AL MODO SERVICIO

Acceso panel control TV

- Con el TV encendido, apagarlo con la tecla "**Standby**" del telemando. Asegurarse de que el aparato ha pasado a "Standby".
- Pulsar primero, la tecla VOL - y después PR - del teclado del TV. Mantenerlas pulsadas al mismo tiempo durante unos 8 segundos
- Después del arranque normal, cuando hayan pasado los 8 segundos, aparecerá el menú principal del Modo Servicio



```
Soft-Ver.   V1.00-5
Config.     W5Z—V   0013
Serial-No.  AHN456789

▶ QUIT
  TUBE
  SETUP
  GEOMETRY
  VIDEO
  IF
  ERROR
```

Nota :

En modo servicio:
- *La función "Bloqueo niños" es reinicializada.*
- *Anula todos las horas programadas*
- *La patilla 8 del SCART es ignorada*
- *La detección de AV- Link, WSS y "modo buzón" (autoformato) se desactiva.*
- *El apagado automático en caso de ausencia de señal de antena es desactivado.*
- *la nitidez es puesta al punto medio.*
- *El Modo Instalación es desactivado.*
- *Zoom y formato ignorados.*
- *El tipo de chasis será comprobado y memorizado.*

2 SALIDA TEMPORAL DEL MODO SERVICIO

- Pulse Salir en el mando a distancia
- Con el botón Menu puede acceder al menú de uso cotidiano. (Teletexto y EPG no disponibles).

- Puede entrar al Menú Servicio con el botón azul.

3 SALIDA DEL MODO SERVICIO

telecomando → - Vaya al punto QUIT del menú principal de modo Servicio → - Pulse el botón ">" → - Modo TV.

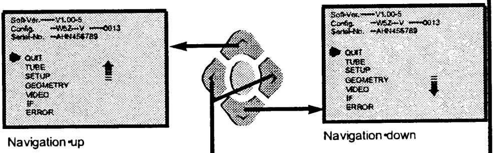
Panel de control TV → - Vaya al punto QUIT del menú principal de modo Servicio → - Pulse el botón "VOL.+" → - Modo TV.

Tecla on/off de → - Función Stand-by o desconexión (off) con tecla on/off.

Los valores o ajustes no se guardan antes de salir del modo servicio y no se escriben en el NVM

II - NAVIGATION INSIDE THE SERVICE MODE - DEPLACEMENT DANS LE MODE SERVICE SUCHE IN SERVICE MODE - OPZIONI NEL SERVICE MODE - BUSQUEDA EN MODO SERVICIO

1 REMOTE CONTROL - TELECOMMANDE - FERNBEDIENUNG TELECOMANDO - MANDO A DISTANCIA


Soft-Ver. V1.00-5
Config. W5Z—V 0013
Serial-No. AHN456789
QUIT
TUBE
SETUP
GEOMETRY
VIDEO
IF
ERROR
Navigation up
Navigation down

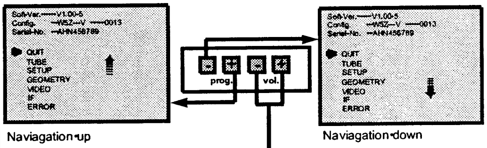
- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "änden"
- "Cambiare" valore
- "Cambiar" valor

> → VALUE ↗

< → VALUE ↘

2 TV CONTROL PANEL - CLAVIER TV - TASTATUR DES FERNSEHGERÄTS - COMANDI DEL TELEVISORE


Soft-Ver. V1.00-5
Config. W5Z—V 0013
Serial-No. AHN456789
QUIT
TUBE
SETUP
GEOMETRY
VIDEO
IF
ERROR
prog.
vol.
Naviagation up
Naviagation down

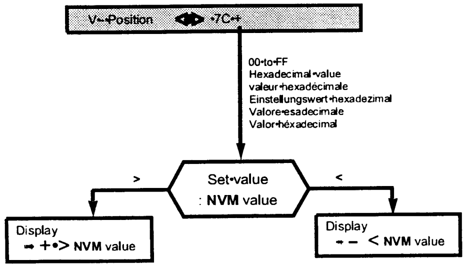
- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "änden"
- "Cambiare" valore
- "Cambiar" valor

Vol. + → VALUE ↗

Vol. - → VALUE ↘

3 DISPLAYING THE VALUE OF THE SETTING - AFFICHAGE DES VALEURS - ANZEIGE DES EINSTELLUNGSWERTES VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - VISUALIZACION DEL VALOR DE AJUSTE


V-Position ◀▶ 7C
00 to FF
Hexadecimal value
valeur hexadécimale
Einstellungswert hexadezimal
Valore esadecimale
Valor héxadecimal
Set value
: NVM value
>
<
Display
→ + > NVM value
Display
→ - < NVM value

4 TOGGLE FUNCTIONS - VALIDATION DES FONCTIONS EIN-UND-AUSSCHALT FUNKTIONEN - FUNZIONI DI COMMUTAZIONE - FUNCION CONMUTACION

To enable a function check (tick) ☒ the box.

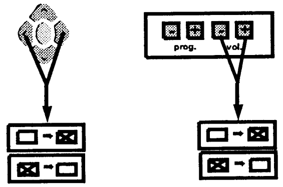
Pour valider une fonction cocher ☒ la case correspondante

Zum Implementieren einer Funktion das Kontrollkästchen ☒ aktivieren (ankreuzen)

Per implementare una funzione di verifica, (vistare) ☒ la casella

Para poner en fucionamiento una función verifique (señale) ☒ la casilla

☒ : Implemented function ☐ : No implemented function



5 STORING VALUES IN MEMORY - MEMORISATION DES VALEURS - SPEICHERN DER WERTE - MEMORIZZAEZ I VALORI - VALORES ALMACENADOS EN LA MEMORIA

After setting, the values are stored in NVM.
Après réglages les valeurs sont mémorisées en NVM.
Nach dem Einstellen werden die Werte im NVM gespeichert.
Dopo la regolazione i valori vengono memorizzati in NVM.
Después del ajuste, los valores son almacenados en NVM

The box ☐ becomes ☒
During alignment, values are temporarily stored in RAM.
En cours d'alignement les valeurs sont mémorisées temporairement en RAM
Während des Abgleichs werden die Werte vorübergehend im RAM gespeichert
Durante l'allineamento i valori vengono memorizzati provvisoriamente sulla RAM
Durante el alineamento, los valores son almacenados temporalmente en RAM

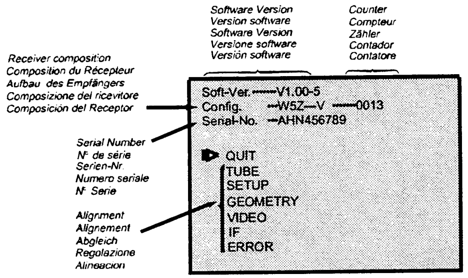
Store ➡ Copies RAM values into NVM
Copie la valeur RAM en NVM
Kopieren des Wertes von RAM nach NVM
Copiare i valori RAM in NVM
Copiar valores RAM en NVM

Restore ➡ Copies all values from NVM into RAM.
Copie toutes les valeurs des données NVM en RAM
Kopiert alle NVM-Datenwerte in des RAM
Copiare tutti i valori da NVM sulla RAM
Copia todos los valores de NVM a RAM

Default ➡ All the default values of a page in use are stored in RAM.
L'ensemble des valeurs par défaut d'une page courante est chargé en RAM.
Sämtliche Standardwerte der aktuellen Seite werden ins RAM geladen
Tutti i valori di default di una pagina in uso vengono memorizzati sulla RAM
Todos los valores por defecto de la página en curso están almacenados en RAM.

III - LITE-MENU FOR FIELD SERVICE MODE - MENUS DU MODE SERVICE

1 MAIN MENU - MENU PRINCIPAL


Software Version
Version software
Software Version
Versione software
Versión software
Counter
Compteur
Zähler
Contador
Contatore
Receiver composition
Composition du Récepteur
Aufbau des Empfängers
Composizione del ricevitore
Composición del Receptor
Serial Number
N° de série
Serien-Nr.
Numero seriale
N° Serie
Alignment
Alignement
Abgleich
Regolazione
Alineacion
Soft-Ver. V1.00-5
Config. W5Z—V 0013
Serial-No. AHN456789
QUIT
TUBE
SETUP
GEOMETRY
VIDEO
IF
ERROR

TV CONFIGURATION - CONFIGURATION DU TV - GERÄTEKONFIGURATION - CONFIGURAZIONE DEL TV - CONFIGURACIÓN Y TV

Config. **W5Z.....V**

Character 1 : Tube type : "A" = 4/3 , "W" =16/9
Character 2 : Teletext external memory detected :
"T" = 128 page, "-" = not (only internal memory)
Character 3 : Ambiant Sensor : "S"= detected, "-" = not
(not ambiant sensor on ICC20 step 1)
Character 4 : Chassis variant : "N"=Nicam, "V"=Virtual Dolby, "D"=Dolby prologic
Character 5 : Noise Reduction upconversion memory detected: "N"=detected
"-" = not
Character 6 : not used / spare
Character 7 : not used / spare

SERIAL-N° **A15...**

Character 1 : Factory, A= Angers, B= Tarancon, Z= Zyrardow
Character 2 : Year : , H= 1996, J= 1997 etc. (International code UTEC90511)
Character 3 : Month, from 1= January to 9=September, O=October, N=November
D=December.
Character 4-9 : Serial N°.

TIME COUNTER - COMPTEUR DE TEMPS - ZÄHLER - CONTATORE - CONTADOR

The counter indicates the TV's number of service hours.It counts from to 0 to 65535 hours. The display is hexadecimal.

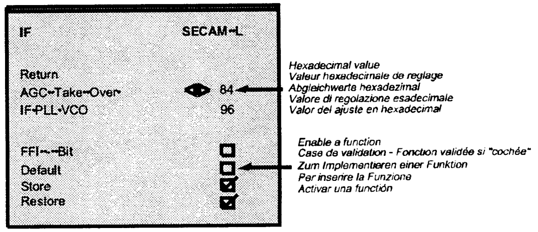
Le compteur de temps indique le nombre d'heures de service du TV. Il compte de 0 à 65535 heures. L'affichage est en hexadécimal.

Der Zähler zeigt an, wieviele Stunden der Fernseher in Betrieb ist. Die Anzeige ist hexadezimal.

Il contatore indica il numero di ore di servizio del TV. Puo' contare da 0 a 65535. La visualizzazione è esadecimale.

El contador indica el número de horas de servicio de la TV. Cuenta de 0 a 65535 horas. El visualizador es hexadecimal.

2 SUBMENU - SOUS-MENU



```
IF                  SECAM-L

Return
AGC-Take-Over   ◀▶  84
IF-PLL-VCO          96

FFI-Bit             ☐
Default             ☐
Store               ☑
Restore             ☑
```

Hexadecimal value
Valeur hexadecimale de reglage
Abgleichwerte hexadezimal
Valore di regolazione esadecimale
Valor del ajuste en hexadecimal
Enable a function
Case de validation - Fonction validée si "cochée"
Zum Implementieren einer Funktion
Per inserire la Funzione
Activar una functión

ALIGNMENT PROCEDURE - PROCESSUS DE REGLAGES - ABGLEICH - VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - PROCEDIMIENTO DE ALINEACION

TUBE

Return
Tube type W76EGV
Store ◀▶ ☑
Restore ☐

SETUP

Return
Clear Progs.
Std. Sound Preset ▶ ☑
Brand Thomson
Kbd. Config. Default
Subwoofer ☑
Feature Pack ☑
Pict. Rotate ☑
Bus Quiet ☐
WSS ☐
Default ☐
Store ☐
Restore ☐

GEOMETRY

Return
Display Mode ◀▶ 16:9 Zoom 0*
V-Slope 8C
V-Amplitude 78
V-Position 99
V-Linearity 28
H-Delay 70
H-Position 64
H-Amplitude C4
EW-Amplitude 84
EW-Trapezium 54
EW-Corner 44
H-Parallel 50
EW-Symmetry 70
Breathing 7F
Default ☐
Store ☐
Restore ☐

Test Bar pattern used : 4/3 with a geometric circle. Complete geometry Adjustment is done according to chassis tube format : **4/3 zoom 0** *mode for* **4/3** *tubes.* **16/9 zoom 0** *mode for* **16/9 tubes** *: see annexed .*

Mire de barre utilisée : 4/3 avec cercle de géométrie. les réglages complets de géométrie sont faits dans le format du tube équipant l'appareil : mode **4/3 zoom 0** *pour les tubes* **4/3**, **16/9 zoom 0** *pour les appareils équipés de* **tubes 16/9**.
voir ci-après

Verwendetes Testbid : 4/3 mit geometrischem Kreis Ein vollständiger Geometrie-Abgleich ist nur notwendig bei **4/3-Röhren** *Zoomstufe* **4/3 Zoom 0** *und* **16/9-Röhren** *Zoomstufe* **16/9 Zoom 0** *: siehe unten.*

Formato Testo utizzato: 4/3 con cerchio geomatrico. La regolazione viene effettuata nel formato del telaio del cinescopio: **4/3 zoom 0** *:tubo* **4/3**; **16/9 zoom 0**: *tubo* **16/9**. *see annexed*

Carta de ajuste utilizada : 4/3 con círculo geométrico. El ajuste completo de la geometria hay que hacerlo de acuerdo con el tipo de chasis y el formato del tubo . Modo **4/3 zoom 0** *para tubos de* **4/3**; *modo* **16/9 zoom 0** *para tubos de* **16/9**.
See annexed

TUBE

Return

Closes the sub-menu and returns to the "Main Service Menu"

Retourne au menu principal.

Schließt das Untermenü, und das Haupt-Menü des Service-Modus erscheint.

Chiude il sottomenu e fa apparire il menu principale Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Tube type

After replacing the NVM, the correct tube type number must be entered (6 characters).
Once entered, the tubes geometry and video default values are immediately activated.
Variable geometry and video parameters are written to the NVM when the "STORE" line is selected. See below the tube type number list.

Definit le tube exact après changement de NVM.
Les nouvelles valeurs de tubes (avec video et géometrie) sont actives de suite.
Les paramètres de vidéo et de géométrie sont chargés en NVM lorsque STORE est sélectionné. Voir liste ci-dessous.

Nach dem Tausch des NVM (EEPROM) muß der richtige Bildrohrtyp eingegeben werden.
Es werden dann sofort die entsprechenden Geometrie-und Video-Defaultwerte aktiviert.
Variable Geometrie-und Videowerte müssen mit "STORE" in das NVM geschrieben werden.
Liste der Röhren: siehe unten.

Definire il tubo appropriato dopo aver cambiato la NVM; I valori per il nuovo tipo di tubo (con video e geometria) sono immediatamente attivi. I parametri per video e geometria variabili vengono immessi nella NVM quando viene selezionata la funzione Store.
Si veda la lista dei tubi riportata sotto.

Definir el tubo correcto después de haber cambiado el NVM.Los nuevos valores de tipo de tubo (con la video y la geometria por defecto) se activan inmediatamente.
Los parámetros variables de geometría y vídeo se graban en el NVM al seleccionar la función Store. Vea más abajo la lista de tubos.

TUBE NAME	LIST	DESCRIPTION
A66EHJ43X12	A66EHJ	4/3 28" MP(1)
A68EGD038X322	A68EGD	4/3 29" SF(2)
A68EJZ011X121	A68EJZ	4/3 29" XF(2)
A68LPQ356X99	A68LPQ	4/3 29" XF (3)
A80EJA16X120	A80EJA	4/3 33" MP(2)
A90AFX14X12	A90AFX	4/3 37" MP(2)
W66EGV023X522	W66EGV	16/9 28" SF(2)
W66LPQ356X99	W66LPQ	16/9 28" SF(3)
W66EJY011X121	W66EJY	16/9 28" XF(2)
W76EGV023X522	W76EGV	16/9 32"SF(1)
W76EJY011X121	W76EJY	16/9 32"XF(2)
W76LPF350X99	W76LPF	16/9 32"SF(4)

(1) : AK, Coty-M
(2) : Invar vector gun, BSVM, Extra Flat
(3) : Invar, DF-II gun, BSVM,NS, Extra Flat
(4) : Invar, DF-III gun, BSVM,NS

→ After setting → Store (+) ☑

SETUP

Return

Closes the sub-menu and returns to the "Main Service Menu"

Retourne au menu principal.

Schließt das Untermenü, und das Haupt-Menü des Service-Modus erscheint.

Chiude il sottomenu e fa apparire il menu principale Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Clear Prog.

Clears all programms stored in memory and resets all Picture and Sound settings to the factory defaults. The AUTO INSTALL (out of factory) mode can be initialised by a long press (>2.5s.) of the selection button.

Efface tous les programmes mémorisés.

Valeurs SON et IMAGES: valeurs usines.
Fonction valide par une longue pression (>2.5s.) sur la touche de sélection </>.

Löscht alle Programmplätze und setzt alle Bild- und Toneinstellungen auf Fabrikwerte zurück. Der AUTO-INSTALL-Modus kann durch einen langen Knopfdruck (>2,5s) initialisiert werden.

Clear Prog.
Cancella tutti i programmi in memoria e regola i Valori analogici SUONO IMMAGINE: ai livelli di fabbrica.Riportare la TV al modo Selezione: pressione prolungata: 2,5 sec. su il pulsante </>.

Programa de borrado.
Borra todos los programas almacenados en la memoria.Valores analógicos de IMAGEN y SONIDO: valores de fábrica.Regreso a la TV para "salir del modo fábrica".Selección: Presión larga igual a 2,5 s.

Std.Sound Preset

Sets the default value for the Standard Sound Preset.
Factory adjusted
Reserve au reglage usine
Reserviert für Fabrikeinstellungen
Riservato alla regolazione di fabbrica
Ajuste reservado fábricas

Brand

Set the "Brand": Thomson, Telefunken, Other
Factory adjusted
Réservé au réglage usine
Reserviert für Fabrikeinstellungen
Riservato alla regolazione di fabbrica
Ajuste reservado fábricas

Kbd. Config.

Factory adjusted
Réservé au réglage usine
Reserviert für Fabrikeinstellungen
Riservato alla regolazione di fabbrica
Ajuste reservado fábricas

Subwoofer

Enable the subwoofer on equiped set.

Validation du Subwoofer sur les appareils équipés .

Einschalten des Subwoofers (wenn vorhanden).

Abilita il subwoofer negli apparecchi equipaggiati.

Validaciónde que existe el subwoofer.

☑ Subwoofer enable ☐ Subwoofer disable

SETUP

Feature Pack

Enables or disables the option to decode and display EPG program data,the Graphic Equalizer, Picture Presets and Sound Presets features (in user menu).

Validation ou inhibition du décodage/affichage des données du programme EPG, de l'équalizer graphique, des pré-réglages son et image dans le menu utilisateur.

Ein- und Abschalten der Optionen Decodierung und Anzeige der EPG Programmdaten, Grafischer Equalizer, Bildvoreinstellungen und Tonvoreinstellungen (in den Benutzermenüs).

Abilita l'EPG, l'equalizzatore grafico, Ipreset Video e preset suono
(in menu suono)

Valida las funciones EPG, Ecualizador gráfico y predeterminados para imagen y sonido (en el menú "Ajustes personales")

☑ Enable ☐ Disable

Picture Rot

Enables the "Earth Field Correction" function (EFC) on ICC20 16/9 and some large screen 4/3 by adding a special bargraph in the "personal settings" menu (user menus).
It is necessary to validate this function if the EFC correction circuit is inserted.

Valide la fonction "correction de champ magnétique terrestre" (EFC) sur les chassis ICC20 16/9 et les appareils 4/3 grand écran par addition d'un bargraphe spécifique dans le menu "réglages personnels"
(menu utilisateur). Cette fonction doit être validée lorsque les circuits de correction "EFC" sont insérés.

Freigabe der Erdfeldkorrektur (EFC) bei ICC20 16/9 und einigen 4/3 Geräten. Im Menü "Eigene Einstellungen" (Menü "Installation") wird ein zusätzlicher Anzeigebalken eingeblendet Nach dem Einbau des EFC-Moduls ist diese Funktiozu aktivieren.

Attiva la funzione "Correzione del campo magnetico terrestre" (EFC) sul telaio ICC20 16/9 e alcuni grandi schermi 4/3 , aggiungendo una speciale barra grafica nei menu di "Menu Principale".
Se il circuito di correzione è montato, è necessario convalidare questa funzione.

Valida la función "corrección del campo magnético terrestre" (EFC) en los chasis ICC20 and some large screen 4/3 añadiendo una barra gráfica en el menú "Ajustes personales". Es necesario validar ésta función si el circuito de corrección EFC está montado.

☑ Rotation bargraph available menu, EFC function active.

☐ Rotation bargraph suppressed from personal settings, EFC circuit disactivated

WSS

Automatic detection of DOLBY surround sound and 16/9 format pictures via Teletext line number 23 is valid on all programmes.

Détection automatique du son surround DOLBY et du format 16/9 via la ligne 23 du Teletxte.
Valide pour tous programmes.

WSS (nur bei 16:9 oder Dolby)
Auswertung der Zeile 23 zur automatischen Format-und Dolbyumschaltung.

Identificazione "auto-Dolby" e "format 16/9" via televideo alla riga 23.La selezione di WSS Processing vale per tutti i programmi.

Detección "auto-surround" y "format" a través de la línea 23 de Teletext.La selección del procesamiento WSS es válida para todos los programas.

☑ Detection enable ☐ Detection disable

→ After setting → Store (+) ☑

SETUP

Bus Quiet

In "Bus Quiet", the NVM can be read, modified and reprogrammed by means of a NVM Programmer.
To access "Bus Quiet" : Long press ">".
The TV should remain in "Bus Quiet" mode until either Exit, Left, Right, Up,Down or Standby keys on the RCU or local keyboard are pressed; at which point the TV should carry out a warmstart in order to prevent differences between the NVM and RAM contents.
After returning from Bus Quiet, the software checks the NVM content.
If it is not valid, the software perform a new default writing of the NVM content.

En mode bus quiet la NVM peut être lue, modifiée et reprogrammée.
Accès au mode Bus quiet :
Longue pression ">".
Utiliser l'une des touches Exit, Gauche, Droite Haut, Bas, standby ou une des touches du clavier pour sortir le téléviseur du mode bus quiet.
A partir de ce point de sortie le démarrage du téléviseur s'effectue à chaud pour éviter toute différence des contenus RAM et NVM.
En sortie de mode bus quiet, le logiciel contrôle le contenu de la NVM.
S'il n'est pas correct le logiciel exécute une nouvelle écriture par défaut de celle-ci.

Im "Bus Quiet"-Modus kann der Inhalt des NVM mittels eines externen NVM-Programmiergerätes ausgelesen, geändert oder neu programmiert werden. "Bus Quiet" wird einem längeren Druck auf ">" aktiviert.
Das Gerät bleibt solange im "Bus Quiet" - Mode, bis durch Druck auf die EXIT-, LINKS-, RECHTS-, HOCH-, RUNTER- oder STANDBY-Taste (am Gerät oder auf der Fernbedienung) ein Warmstart des Gerätes veranlaßt wird, um unterschiedliche Daten in RAM und NVM zu vermeiden.
Es folgt ein Software-Check des NVM-Inhaltes.
Sollte dieser nicht gültig sein, wird der Inhalt mit Default-Werten überschrieben.

In Modo Bus Quiet, la memoria NVM può essere letta, modificata o riprogrammata.
Per accedere al modo Bus Quiet premere a lungo il tasto ">".
Il TV rimane in modo Bus Quiet fino a che vengono premuti i tasti Exit, o Destro Sinistro, Su o Giù o Standby dal telecomando o dalla tastiera locale; a questo punto il TV riparte per evitare interferenze tra i contenuti della memoria NVM e della RAM.
All'uscita dal modo Bus Quiet, il software controlla il contenuto della memoria NVM. Se tale contenuto non è valido, il software provvede a una nuova programmazione della NVM con l'inserimento dei dati di default.

En bus quieto, la NVM puede ser leída, modificada y reprogramada.
Acceso a bus quieto : Larga presión en ">"
El TV permanecerá en bus quieto hasta que se pulse cualquiera de las teclas siguientes: Exit, "<", "Λ", "V", ">"o Standby del telemando o del teclado.
En este momento el TV arrancará para evitar cualquier diferencia entre los contenidos de la RAM y NVM.
Al salir del modo bus quieto, el software comprueba el contenido de la NVM.
Si no coincide, el software ejecuta la escritura de los datos en la NVM.

☑ Bus quiet enable ☐ Bus quiet disable

→ After setting → Store (+) ☑

GEOMETRY

Return

Closes the sub-menu and returns to the "Main Service Menu"

Retourne au menu principal.

Schließt das Untermenü, und das Haupt-Menü des Service-Modes erscheint.

Chiude il sottomenu e fa apparire il menu principale Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Display Mode

Complete geometry adjustment is done according to chassis tube format :
4/3 zoom 0 mode for **4/3 tubes, 16/9 zoom 0** mode for **16/9 tubes.**
In all other modes it is only necessary to adjust some few registers.
The actual format mode has to be displayed in the Geometry Service mode.
It has to be possible to change the format during the geometry alignment without leaving the Service mode.

The available display modes depend on the picture tube format.
4/3 tube : 2 modes 4/3 and 16/9
16/9 tube : 3 modes 16/9 standard,
4/3 Zoom 0, Cinerama

The menu shows only the registers which have to be aligned for the actual picture format currently displayed.

Les réglages complets de géométrie sont faits dans le format du tube équipant l'appareil.
Mode **4/3 zoom 0** pour les tubes **4/3**, **16/9 zoom 0** pour les tubes **16/9**.
Dans les autres modes seuls quelques registres nécessitent un réglage.
Le format de réglage doit être affiché dans le menu de géométrie du mode service.
Il est possible de changer le format sans quitter le mode service.

Différents types d'affichage disponibles :

tube 4/3 : 2 modes 4/3 et 16/9
tube 16/9 : 3 modes 16/9 standard,
4/3 Zoom 0, Cinerama

Le menu correspondant montre seulement les registres à régler.

Ein vollständiger Geometrie-Abgleich ist bei **4/3-Röhren** nur in der Zoomstufe **4/3 Zoom 0** und bei **16/9-Röhren** nur in der Zoomstufe **16/9 Zoom 0** notwendig.
In allen anderen Zoomstufen sind eine geringere Anzahl von Einstellungen vorzunehmen.
Während des Geometrie-Abgleiches wird zur Kontrolle ständig das aktuelle Bildformat eingeblendet. Während des Geometrie-Abgleiches ist es möglich, das Bildformat zu ändern, ohne den Service Mode zu verlassen.

Die verfügbaren Bildformate sind abhängig vom Bildrohr-Format.
4/3-Röhre : 2 Bildformate 4/3 und 16/9
16/9-Röhre : 3 Bildformate 16/9 Standard,
4/3 Zoom 0 und Cinerama

Das Abgleich-Menü zeigt immer nur die Funktionen an, die im aktuellen Bildformat eingestellt werden müssen.

La disponibilita dei modi display dipende dal formato del tubo:
tubo 4/3 : 2 modi 4/3, 16/9
tubo 16/9 : 3 modi 16/9 standard, 4/3 zoom0
cinerama
Il corrispondente menu mostra solo i registri di regolazione.
Le regolazioni complete di geometria vengono fare in base al tubo.
per **tubi 4/3** - 4/3 zoom 0
per **tubi 16/9** - 16/9 zoom 0

In tutti gli altri modi è necessario regolare solo alcuni registri.
Il formato di regolazione deve essere selezionato nel menu di geometria nel modo service.
E´ possibile canbiare formato senza uscire da service mode

GEOMETRY

Display Mode

Los ajustes completos de geometría se harán de acuerdo al formato del tubo montado:
modo 4/3 para tubos de **4/3 zoom 0**,
modo 16/9 zoom 0 para tubos **de 16/9**.
En todos los otros modos, sólo será necesario ajustar unos pocos registros.
El modo de formato actual debe ser accedido desde el Modo Servicio.
Es posible cambiar el formato sin salir del Modo Servicio.

Los formatos que se pueden visualizar, dependen del tipo de tubo.
Tubos de 4/3 : 2 modos, 4/3 y 16/9
Tubos de 16/9: 3 modos, 16/9 estándar,
4/3 Zoom 0 y Cinerama.

El menú correspondiente mostrará sólo los ajustes a efectuar.

V-Slope

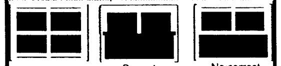
- Apply a test pattern signal to the TV with a single horizontal and vertical line on the screen.
- Select the **"VS"** line of the menu. The bottom half of the screen will go black.
- Adjust VS until the centre line of the pattern is just invisible.
- Leave the line **"V_Slope"**.
- Switch the test pattern signal to the crosshatch geometry pattern.
- Perform the geometry adjustments described below.

- Appliquer une mire de barres avec seulement une ligne blanche horizontale en milieu de l'écran.
- Sélectionner la ligne **"V-Slope"**.
  La moitié basse de l'écran devient noire.
- Aligner **"V_Slope"** pour que la ligne médiane soit à peine non visible.
- Commuter la mire en mode de réglage de géométrie (quadrillage).
- Effectuer les reglages de geometrie.

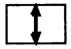
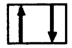
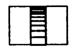
- Speisen Sie ein Testbild mit einem horizontalen Strich in der Bildmitte ein.
- Wählen Sie im Menü die Funktion "V-Slope" an.
  Die untere Bildhälfte wird dunkel.
- Stellen Sie "V-Slope" so ein, daß die Mittellinie fast verschwindet.
- Verlassen Sie die Funktion "V-Slope".
- Speisen Sie ein Gittertestbild ein.
- Nehmen Sie die Geometrieeinstellungen wie nebenstehend beschrieben vor.

- Applicare un monoscopio con un'unica linea bianca orizzontale al centro dello schermo
- Selezionare la riga **"V slope"** del menu. La parte bassa dello schermo viene oscurata.
- Allineare la "Vertical Slope" in modo che la linea centrale sia appena visibile
- Abbandonare la riga **"V slope"**.
- Posizionare il monoscopio
- Effettuare le regolazioni di geometria descritte in precedenza
- Memorizzare.

- Aplique una carta de ajuste con sólo una línea blanca horizontal y una vertical en el centro de la pantalla.
- Seleccionar en el menú, la línea **"V-Slope"**. La mitad inferior de la pantalla se pondrá oscura.
- Ajuste **"V-Slope"** justo hasta que la línea horizontal sea invisible.
- Cambiar la carta de ajuste a "cuadrícula" y efectuar los ajustes de geometria descritos a continuación.
- Antes de salir, memorizar con "Store"



GEOMETRY

V-Amplitude	
V-Position	
V-Linearity	

H-Delay
Horizontal-Delay

Increase/decrease value to center the image inside the displayed curtains.
Adjust H-Delay before "H-Position"

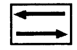
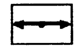
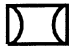
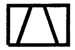
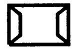
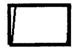
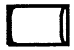
Augmenter/diminuer la valeur de H-Delay pour centrer l'image à l'intérieur des "rideaux".
Ajuster H-Delay avant "H-Position"

Zentrieren Sie das Bild horizontal zwischen die dunkelgetasteten senkrechten Balken.
Gleichen Sie H-Delay vor "H-Position" ab.

Incrementare / Decrementare il valore per centrare l'immagine.
Regolare H-Delay prima "H-Position".

Aumentar ó disminuir el valor de H-Delay para el centro de la imagen en el interior de las "cortinas".
Ajustar H-Delay antes que H-Position

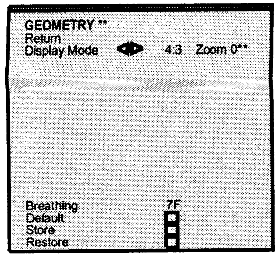
Press </>: remote control; Vol. +/- : TV keyb.

H-Position	
H-Amplitude	
EW-Amplitude	
EW-Trapezium	
EW-Corner	
H-Parallel	
EW-Symmety	

Breathing
EHT compensation

Factory adjusted
Réservé au réglage usine
Reserviert für Fabrikeinstellungen
Riservato alla regolazione di fabbrica
Ajuste reservado fábricas

→ After setting → Store (+) ☑

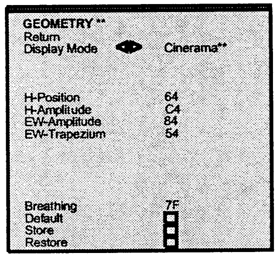


```
GEOMETRY **
Return
Display Mode    ◆    4:3   Zoom 0**



Breathing             7F
Default               ☐
Store                 ☐
Restore               ☐
```

GEOMETRY

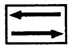
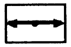
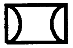
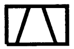
Breathing
EHT-compensation

Factory adjusted
Réservé au réglage usine
Reserviert für Fabrikeinstellungen
Riservato alla regolazione di fabbrica
Ajuste reservado fábricas



```
GEOMETRY **
Return
Display Mode    ◆    Cinerama**

H-Position            64
H-Amplitude           C4
EW-Amplitude          84
EW-Trapezium          54

Breathing             7F
Default               ☐
Store                 ☐
Restore               ☐
```

GEOMETRY

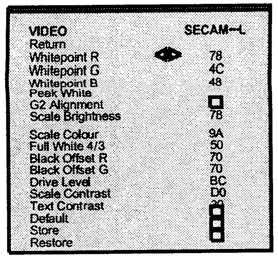
H-Position	
H-Amplitude	
EW-Amplitude	
EW-Trapezium	

Breathing
EHT-compensation

Factory adjusted
Réservé au réglage usine
Reserviert für Fabrikeinstellungen
Riservato alla regolazione di fabbrica
Ajuste reservado fábricas

⟹ After setting ⟹ Store (+) ☑

Note:
** Specific menu: 16/9 set
** Menú específico: aparatos 16/9



```
VIDEO                       SECAM-L
Return
Whitepoint R        ◆       78
Whitepoint G                4C
Whitepoint B                48
Peak White
G2 Alignment                ☐
Scale Brightness            7B
Scale Colour                9A
Full White 4/3              50
Black Offset R              70
Black Offset G              70
Drive Level                 BC
Scale Contrast              D0
Text Contrast               30
Default                     ☐
Store                       ☐
Restore                     ☐
```

VIDEO PAL

Return

Closes the sub-menu and returns to the "Main Service Menu"
Retourne au menu principal.
Schließt das Untermenü, und das Haupt-Menü des Service-Modes erscheint.
Chiude il sottomenu e fa apparire il menu principale Service Mode.
Cierra el submenú. El menú Field Service Mode aparece.
Press </>: remote control; Vol. +/- : TV keyb.

Whitepoint R* **Whitepoint G*** **Whitepoint B***	⚙+◑+◐ = standard Grey scale test pattern white =50% Amplitude: 350mVBW RF-PAL RF-SECAM AV1- RGB grey
Peak-White**	⚙+◐+◑ = standard Peak white test pattern white = 100% RF-BG; RF-L; AV1 RGB Colourimeter

Tube Type	[Nits]	Tube Type	[Nits]
A59EHJ	380	W66EGV	480
A68EGD	400	W66LPQ	450
A68EJZ	-	W66EJY	-
A68LPQ	-	W76EGV	380
A80EJA	350	W76EJY	-
A90AFX	-	W76LPF	-

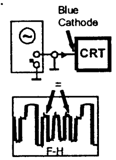
G2 Alignment	Display a full screen black OSD Adjust G2 with SCREEN potentiometer: see adjust table Ecran totalement noir. Régler G2 avec le potentiomètre SCREEN : voir tableau des réglages.(p.12). Das Bild wird dunkelgetastet Gleichen Sie G2 mit dem SCREEN-Potentiometer wie auf seite 12. beschrieben ab. Visualizzare uno schermo nero e regolar il potenziomero G2 riferendos alla tabella regolazione (p.12) Pantalla totalmente oscura sin OSD. Ajustar la G2 con el potenciómetro SCREEN: ver tabla (p.12). ☑ G2_adjust on ☐ Reset G2-adjust and restores the video menu.

Note:
* Adjust separate for PAL RF/SECAM RF and RGB/AV Whitepoints cannot be aligned in I PAL

** After PEAK white adjustment control whitepoints setting.
Repeat the adjustments if necessary.

Color standard or RGB is autodetected and displayed opposite the displayed opposite the menu title.

VIDEO PAL

Scal. Brightness	⚙+◑+◐ = standard Grey scale test pattern white = 100% black
Scal*. Colour	⚙+◑+◐ = standard PAL (then SECAM +RGB) 75% Colour bar test pattern via RF. 
Full White 4/3 **Black Offset R** **Black Offset G** **Drive Level** **Scale Contrast**	Factory adjusted Réservé au réglage usine Reserviert für Fabrikeinstellungen Riservato alla regolazione di fabbrica Ajuste reservado fábricas
Text Contrast	⚙+◑+◐ = standard

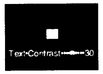
Adjust Text contrast for V=60V at pin 11 (Blue) of the CRT : 40% V peak white

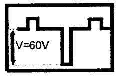
Ajuster Text Contrast pour obtenir un niveau de sortie V=60V sur la cathode Bleue du tube (point 11 de la CRT): 40% V peak white.

Stellen Sie mit Text Contrast V=60V an der Blau-Kathode (Pin 11) der Bildröhre ein: 40% Vpeak white

Regolare il guadagno contrasto televideo per ottenere al catodo del blu un livello pari a V=60V (CRT pin 11): 40% Vpeak white.

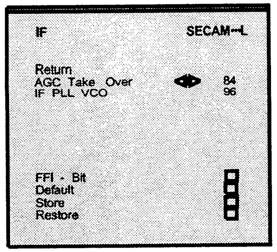
Ajuste Text Gain para dejar V=60V en azul del TRC (CRT Patilla 11): 40% Vpeak white





CRT Pin 11

⟹ After setting ⟹ Store (+) ☑



```
IF                          SECAM-L

Return
AGC Take Over       ◆       84
IF PLL VCO                  96




FFI - Bit                   ☐
Default                     ☐
Store                       ☐
Restore                     ☐
```

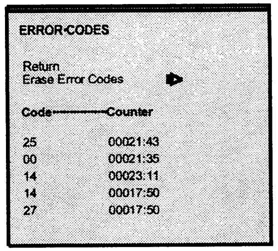
IF

Return

Closes the sub-menu and returns to the "Main Service Menu"
Retourne au menu principal.
Schließt das Untermenü, und das Haupt-Menü des Servic e-Modes erscheint.
Chiude il sottomenu e fa apparire il menu principale Service Mode.
Cierra el submenú. El menú Field Service Mode aparece.
Press </>: remote control; Vol. +/- : TV keyb.

AGC Take Over	1mV : antenna input of the tuner - Minimum noise - Minimum de bruit - Minimum Rauschen - Rumore minimo - Minimo ruido
IF PLL VCO	Adjust IF PLL VCO for "OK" indicating. Adjust for standard L' and others.
FFI Bit	Fast Filter (IF / PLL) Filtre rapide (FI / PLL) Schnelles filter (ZF / PLL) Filtro /rapido (IF / PLL) ☑ Asia ☐ Europ

⟹ After setting ⟹ Store (+) ☑



```
ERROR CODES

Return
Erase Error Codes       ▶

Code ---------- Counter

25              00021:43
00              00021:35
14              00023:11
14              00017:50
27              00017:50
```

ERROR CODE

Return

Closes the sub-menu and returns to the "Main Service Menu"
Retourne au menu principal.
Schließt das Untermenü, und das Haupt-Menü des Servic e-Modes erscheint.
Chiude il sottomenu e fa apparire il menu principale Service Mode.
Cierra el submenú. El menú Field Service Mode aparece.
Press </>: remote control; Vol. +/- : TV keyb.

Erase Error Codes	To clear all error codes stored in the NVM. Action: Long press (> 2.5sec.).

Press </>/OK: remote control; Vol. +/- :TV keyb.

CODE LED Error Codes

The last five error codes are stored and displayed as they occured in real time, the most recent error code is displayed on the top line. A repeated top line error code has its real time count updated. There are 35 different error codes, which are signalled by the TV's Standby LED, ranging in value from 10 to 49 hex. The error code is displayed as two separate digits separated by a suitable pause, this is repeated until the either the TV fixes the fault or the TV is repaired. For example Error-code : 23 will be displayed thus:
2 flashes and a short pause
3 flashes and a long pause
....
List of Errors Codes : see table

Mémorise les cinq derniers codes erreurs et affiche en haut d'écran les plus récents.
35 codes erreurs différents sont signalés par deux digits selon une séquence spécifique
Exemple :
Code erreur : 23 affiché
2 flashes, courte pause
3 flashes : longue pause
....
Voir ci-contre la liste des codes erreurs

Zeigt die letzen 5 Fehlercodes mit der Laufzeit an. Der zuletzt aufgetretene Fehler steht an erster Stelle. Sollte ein Fehler wiederholt auftreten wird nur die Laufzeit aktualisiert.
Die Fehlercodes können im Menü Error Code angezeigt werden oder über die Kontroll-LED angezeigt werden.

Beispiel für die Anzeige über die Kontroll LED:

Fehlercode 23 :
Zweimaliges Blinken der LED, kurze Pause.
Dreimaliges Blinken der LED, lange Pause.
Auflistung der Fehlercodes : siehe Liste

Memorizza gli ultimi cinque codici d'errore dopo che ognuno di essi e verrà visualizzato (attraverso il contatore della durata di esecuzione). L'errore più recente viene visualizzato in cima. La ripetizione del codice di errore in cima alla lista non farà altro che aggiornare la durata di esecuzione. Dal LED del TV vengono segnalati 35 codici d'errore differenti, numerati da 10 a 49. Il codice d'errore è indicato da due cifre separate da un opportuno intervallo di tempo e verrà ripetuto fino a quando il televisore non sarà stato riparato o non si sarà corretto da solo.
Ad es:
Il codice d'errore 23 visualizzerà:
2 segnali luminosi con pausa breve
3 segnali luminosi con pausa lunga
Per la lista dei Codici d'Errore, si veda la tabella

Guarda los últimos cinco códigos de error cuando cada uno ocurre (gracias al contador de tiempo de ejecución). El error más reciente se visualiza en la parte superior. Una repetición del código de error en la parte superior de la lista solamente actualiza el tiempo de ejecución. El indicador TV LED indica 35 códigos de error diferentes: de 10 a 49. El código de error se señala en forma de dos digitos separados con una pausa apropiada entre los dos y se repetirá hasta que repare el TV o él se repara a sí mismo.
Por ejemplo,
Se va visualizar el código de error 23:
2 parpadeos, una pausa corta;
3 parpadeos, una pausa larga.
Para la Lista de códigos de error, consulte la tabla.

ERROR CODES

GB

10 Display effective child lock mode
11 Display timer mode
12 Audio-MSP doesn't answer anymore
13 Audio-Dpl doesn't answer anymore
14 TDA9330H doesn't answer anymore
15 TDA9321 doesn't answer anymore
16 DMU0 doesn't answer anymore
17 SAA4956 doesn't answer anymore
18 TDA9178 doesn't answer anymore
19 Tuner doesn't answer anymore
20 I2C Bus is loocked
21 I2C Bus data line held low
23 I2C Bus clock line held low
25 Switched 5V not available
26 Tube gets not warm in time
27 Deflection detects >3 times prot
28 Vertical deflection safety is effective
29 Horizontal deflection safety is effective
31 Call with pointer that was not allocated
32 A software-timer has been requested but isn't available yet
34 The NVM chip doesn't answer anymore
35 5V and 8V not available
36 Wrong address passed to the bus-handler
37 Unexpected level on NMI line found
38 Heap full - There is no RAM available for the requested operation
39 I2C Bus data line not recoverable
41 Power down detection TDA9178 (PSI)
42 Power on reset error TDA9320 (HIP)
43 Power on reset error TDA9330 (HOP)
44 NRF bit problem (only factory information)
45 FLS bit problem (only factory information)
46 NHF bit problem (only factory information)
47 NDF bit problem (only factory information)
48 XPR bit problem (only factory information)
49 Problem with bits SXA…D (factory information)

F

10 Fonction clef enfant active
11 Mode timer
12 Audio MSP ne répond plus
13 Audio-Dpl ne répond plus
14 TDA9330H ne répond plus
15 TDA9321 ne répond plus
16 DMU0 ne répond plus
17 SAA4956 ne répond plus
18 TDA9178 ne répond plus
19 Tuner ne répond plus
20 I2C-bus bloqué
21 I2C-bus data forcé au niveau bas
23 I2C-bus clock forcé au niveau bas
25 Le "5V commuté" n'est pas disponible
26 Tube ne chauffe pas a temps
27 Plus que 3-fois la déflection a détecté une "protection"
28 Sécurité déviation verticale active
29 Sécurité déviation horizontale active
31 Appel par pointeur non alloué
32 Logiciel-timer non disponible
34 NVM (mémoire) ne répond plus
35 5V et 8V non disponibles
36 NVM adresse erronée
37 Niveau incorrect sur la ligne NMI
38 Pile pleine - Il n'y a plus de RAM disponible pour l'opération requise
39 I2C-bus data non récupérable
41 Détection mauvaise alimentation TDA9178
42 Erreur de reset TDA9320
43 Erreur de reset TDA9330
44 Problème bit NRF (information usine seulement)
45 Probleme bit FLS (information usine seulement)
46 Problème bit NHF (information usine seulement)
47 Problème bit NDF (information usine seulement)
48 Problème bit XPR (information usine seulement)
49 Problème avec les bits SXA…D (information usine seulement)

D

10 Kindersicherung aktiv
11 Weckerfunktion aktiv
12 Audio-MSP antwortet nicht
13 Audio-Dpl antwortet nicht
14 TDA9330H antwortet nicht
15 TDA9321 antwortet nicht
16 DMU0 antwortet nicht
17 SAA4956 antwortet nicht
18 TDA9178 antwortet nicht
19 Tuner antwortet nicht
20 I2C Bus ist blockiert
21 I2C Bus Data ist immer L
23 I2C Bus Clock ist immer L
25 Geschaltete 5V nicht vorhanden
26 Bildrohr ist nicht rechtzeitig aufgeheizt
27 Schutzschaltung hat dreimal ausgelöst
28 Vertikal-Schutzschaltung ist aktiv
29 Horizontal-Schutzschaltung ist aktiv
31 Softwarefehler (nur für Produktionsstätten)
32 Softwarefehler (nur für Produktionsstätten)
34 NVM (EEPROM) antwortet nicht
35 5V und 8V nicht vorhanden
36 Softwarefehler (nur für Produktionsstätten)
37 Unerwarteter Zustand auf NMI-Leitung
38 Softwarefehler (nur für Produktionsstätten)
39 I2C Bus Data-Leitung nicht reaktivierbar
41 Power down detection TDA9178 (PSI)
42 Problem während des Resets TDA9320 (HIP)
43 Problem während des ResetsTDA9330 (HOP)
44 NRF Bit Problem (nur für Produktionsstätten)
45 FLS Bit Problem (nur für Produktionsstätten)
46 NHF Bit Problem (nur für Produktionsstätten)
47 NDF Bit Problem (nur für Produktionsstätten)
48 XPR Bit Problem (nur für Produktionsstätten)
49 Problem mit Bits SXA…D (nur für Produktionsst.)

I

10 Funzione child lock attiva
11 Modo timer
12 MSP-Audio non risponde
13 DPL-Audio non risponde
14 TDA9330H non risponde
15 TDA9321 non risponde
16 DMU0 non risponde
17 SAA4956 non risponde
18 TDA9178 non risponde
19 Tuner non risponde
20 I2C Bus è bloccato
21 I2C Bus data forzata bassa
23 I2C Bus clock forzata bassa
25 Tensione 5V commutata non disponibile
26 Tubo non trasmette informagione caldo entro il tempo stabilito
27 Deflessione rileva>3 volte protezione
28 Protezione deflessione verticale attiva
29 Protezione deflessione orizzontale attiva
31 Chiamata al pointer non assegnata
32 Logica timer non disponibile
34 L'integrato NVM non risponde
35 5V e 8V non disponibili
36 Indirizzamento NVM errato
37 Livello incorretto sulla linea NMI
38 Pile piena - RAM non disponibile per l'operazione richiesta
39 Linea I2C Bus non recuperabile
41 Rilevazione mancata alimentazione el TDA9178 (PSI)
42 Errore di reset TDA9320 (HIP)
43 Errore di reset TDA9330 (HOP)
44 Problema di bit NRF (informazione solo per fabrica)
45 Problema di bit FLS (informazione solo per fabrica)
46 Problema di bit NHF (informazione solo per fabrica)
47 Problema di bit NDF (informazione solo per fabrica)
48 *Problema di bit XPR (informazione solo per fabrica)*
49 Problema con bit SXA…D (informazione di fabrica)

E

10 Función "bloqueo niños" activa
11 Modo "timer" activado
12 El procesador de audio MSP no responde
13 El DPL de audio no responde
14 El TDA9330H no responde
15 El TDA9321 no responde
16 El DMU 0 no responde
17 El SAA4956 no responde
18 El TDA9178 no responde
19 El sintonizador no responde
20 El bus I2C está bloqueado
21 La línea de datos del bus I2C forzada a nivel bajo
23 La línea clock del bus I2C forzada a nivel bajo
25 Faltan los +5V conmutados
26 El TRC no se calienta en el tiempo establecido
27 La deflexión detecta una protección > de 3 veces
28 Seguridad de la deflexión vertical activada
29 Seguridad de la deflexión horizontal activada
31 El puntero no puede encontrar la posición solicitada
32 Una solicitud de "timer" no está disponible
34 La NVM no responde
35 Faltan los 5V y los 8V
36 Dirección errónea solicitada por el bus
37 Encontrado un nivel inesperado en la línea NMI
38 Pila llena. No queda RAM disponible para la operación solicitada
39 Línea de datos del bus I2C no recuperable
41 Detección de fallo en alimentación TDA9178 (PSI)
42 Error de reset en el encendido TDA9320 (HIP)
43 Error de reset en el encendido TDA9330 (HOP)
44 Fallo en el bit NRF (información sólo para fábrica)
45 Fallo en el bit FLS (información sólo para fábrica)
46 Fallo en el bit NHF (información sólo para fábrica)
47 *Fallo en el bit NDF (información sólo para fábrica)*
48 Fallo en el bit NDF (información sólo para fábrica)
49 Fallo en los bits SXA…D
(información sólo para fábrica)

GEOMETRY MODE ALIGNMENT

4/3 picture tube

A ICC20 4/3 set needs a geometry alignment only in the 4/3 Zoom 0 mode. All other formats and zoom mode are calculated.

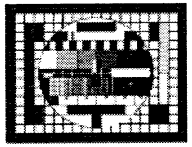
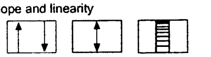
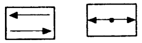
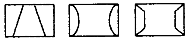
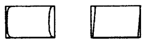
Un chassis ICC20 4/3 ne nécessite des réglages de géométrie que dans le mode 4/3 zoom 0. La géométrie des autres formats et zoom est calculée.

Beim Chassis ICC20 4/3 ist ein Geometrie-Abgleich nur im Bildformat 4/3 Zoom 0 notwendig. Die Werte für alle weiteren Formate und Zoomstufen werden berechnet.

Il telaio ICC20 4/3 richiede l'allineamento solo nel formato 4/3 zoom 0. Tutti gli altri formati zoom sono calcolati.

Un TV ICC20 4/3 sólo necesita ajustar la geometría en modo 4/3 Zoom 0. Todos los otros formatos y modos de zoom, son calculados.

Signal : 4/3 test pattern

4/3 standard mode zoom 0		**Overscan V=107% , H=107%** 1- Adjust Vertical position and Vertical amplitude 2- Adjust Vertical Slope and linearity  3- Adjust Horizontal Delay, Horizontal Position and Horizontal amplitude  4-Adjust EW Amplitude ,EW Shape and Trapezium, EW Corner,  5-Adjust EW Symmetry and Horizontal parallelogram 

16/9 picture tube

A ICC20 16/9 set needs a complete geometry alignment in the 16/9 Zoom 0 mode and additionnaly an alignment of H-amplitude (104%), EW-Amplitude, H-position and EW-trapezium in Cinerama mode (if fitted). All others formats all others formats and zoom mode are calculated.

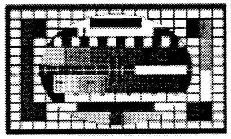
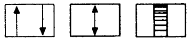
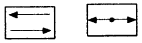
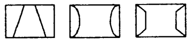
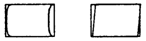
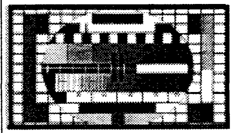
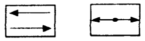
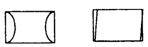
Un chassis ICC20 16/9 ne nécessite un alignement complet des réglages de géométrie que dans le mode 16/9 zoom 0 et en outre des réglages de H-amplitude (104%), EW-Amplitude, H-position et EW-trapèze en mode Cinérama (si les circuits correspondants sont insérés).
La géométrie des autres formats et zoom est calculée.

Beim Chassis ICC20 16/9 ist ein vollständiger Geometrie-Abgleich nur im Bildformat 16/9 Zoom 0 notwendig. Wenn das Bildformat Cinerama verfügbar ist, müssen für diesen H-Amplitude (104%),EW-Amplitude, H-Position und EW-Trapezium abgeglichen werden.
Die Werte für alle weiteren Formate und Zoomstufen werden berechnet.

Il telaio ICC20 16/9 richiede l'allineamento nel formato 16/9 zoom 0 e un allineamento supplementare dell' Ampiezza H (104%), Ampiezza EW Posizione H e Trapezio EW nel modo Cinerama. Tutte le regolazioni negli altri formati zoom sono calcolate.

Un TV ICC20 16/9 necesita un ajuste completo de geometría en el modo 16/9 zoom 0 y además un ajuste de la anchura horizontal (104%), posición horizontal y amplitud / trapecio E/W en modo "Cinerama" (si está incorporado). Todos los otros formatos y modos de zoom, son calculados.

Signal : 4/3 test pattern

16/9 standard mode zoom 0		**Overscan V=107%, H=104%** 1- Adjust Vertical position and Vertical amplitude 2- Adjust Vertical Slope and linearity  3- Adjust Horizontal Delay, Horizontal Position and Horizontal amplitude  4-Adjust EW Amplitude ,EW Shape and Trapezium, EW Corner,  5-Adjust EW Symmetry and Horizontal parallelogram 
4/3 CINERAMA mode		**Mode CINERAMA Overscan V=114%, H=104%** 1- Adjust Horizontal position and Horizontal amplitude  2- Adjust EW Amplitude, EW Trapezium 

ALLGEMEINE INFORMATIONEN

FEHLERSUCH-METHODIK

1 - EINSCHALTEN DES GERÄTES:

- Beobachten Sie beim Einschalten des Gerätes die Standby-LED. Abweichungen vom "normalen" Einschaltverhalten des Gerätes können Hinweise auf eventuelle Fehler im Gerät und deren möglichen Ursachen geben.

2 - FEHLERSUCHE : VERHALTEN DER LED :

In bestimmten Fällen bedeutet ein Blinken der LED die Anzeige eines Fehlercodes:

- Zählen Sie die Anzahl des Aufblinkens mit. Der zweistellige Fehlercode wird in zwei Gruppen von Blinkimpulsen, getrennt von einer 0,7s Pause, dargestellt.
  Die Anzeige des Fehlercodes wird mehrere Male wiederholt.

Siehe ***TABELLE DER FEHLERCODES***.

3 - FEHLERSUCHE :

Das Chassis ICC20 besteht im Wesentlichen aus zwei Platinen. Zuerst sollte festgestellt werden, welche Platine defekt ist und ob eine der Schutzschaltungen abgesprochen hat.

ÜBERPRÜFEN SIE ZUERST DEN KORREKTEN SITZ DIE BEIDEN PLATINEN VERBINDENDEN **FLACHBANDKABEL**

a - Das Chassis arbeitet ganz oder teilweise :
- Beobachten Sie die LED benutzen Sie die die Fehlersuchmethoden 1 und 2.
- Schauen Sie auch bei "***Symptom*** " nach ähnlichen Fehlererscheinungen nach.

b - Das Chassis geht ständig oder periodisch in Schutzzustand :
b.1- Beobachten Sie das Verhalten der LED (Blinken rot, ständig orange gefolgt von Blinken usw.)
-Wählen Sie die entsprechende Box: " ***Fehlersuche über das Verhalten der LED*** ".

Siehe Tabelle der Fehlercodes.
Beispiel :
Das Gerät macht drei Startversuche ehe es in Standby geht :

- Fehlercode 25 : +5V nicht verfügbar
- Fehlercode 35 : +5V and +8V nicht verfügbar.
- Fehlercode 37 : Unerwarteter Zustand auf der NMI (POWER FAIL)-Leitung

Dieses deutet auf ein Fehler auf der "***NETZTEIL- UND ABLENKPLATINE*** " hin.
Bitte beachten Sie :
Diese Informationen sind nur Hinweise ! Die Anzeige der Fehlercodes und die Reaktion des Gerätes ist stark davonabhängig, wie der Fehler beschaffen ist und dem Zeitpunkt, wann er festgestellt wird. (Betriebszustand des Gerätes).

Wird ein Fehler während der Warmstarroutine dreimal festgestellt, wird im EEPROM zusätzlich zum Code der Fehlerursache auch der Fehlercode 27 mit abgespeichert

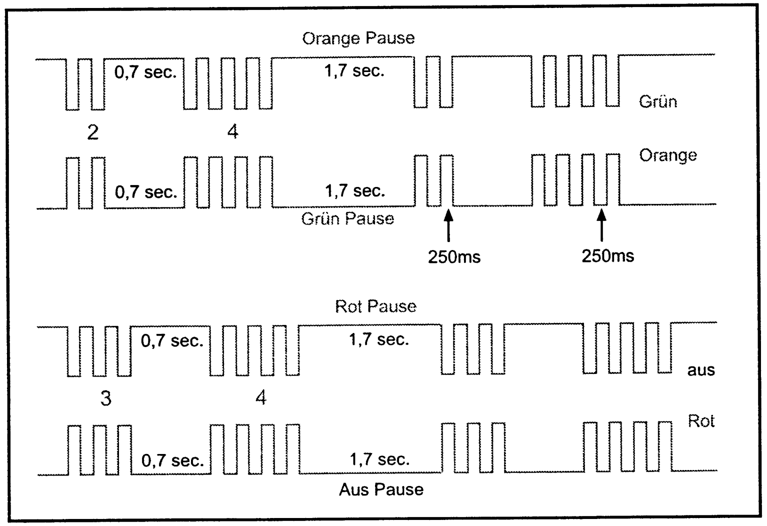
b.2- Die LED bleibt aus:
Überprüfen Sie zuerst die "***NETZTEIL- UND ABLENKPLATINE*** ".

ALLGEMEINE INFORMATIONEN - VERHALTEN DER LED

Blinken der LED

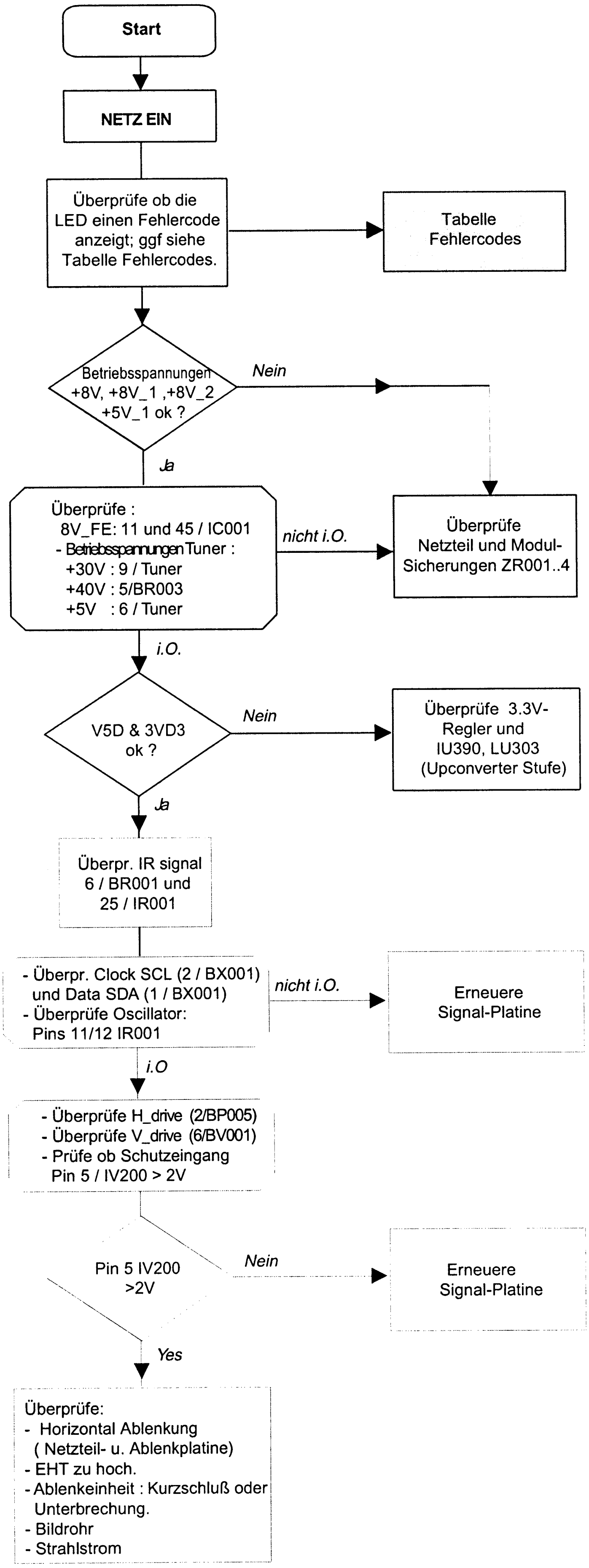
Anzeige eines Fehlercodes
Die Fehlercodes werden durch ein Blinken der roten

Zählen Sie die Anzahl der Blinkimpulse: der Fehlercode wird in zwei Gruppenn, getrennt von einer 0,7s Pause übertragen. Zwischen der Anzeige von zwei Fehlercodes ist eine Pause von 1.7 s.



CODES	FEHLER
10	Kindersicherung aktiv (Kein Fehlercode!)
11	Weckerfunktion aktiv (Kein Fehlercode !)
12	Erster Audio- MSP antwortet nicht
13	(Audio- DPL antwortet nicht)
14	TDA9330H antwortet nicht (oder +8V fehlen)
15	TDA9321 antwortet nicht (oder +8V fehlen)
16	DMU0 antwortet nicht
17	SAA4956 antwortet nicht
18	TDA9178 antwortet nicht
19	(Tuner antwortet nicht)
20	(I2C Bus ist blockiert)
21	I2C Bus Data ist immer L
23	I2C Bus Clock ist immer L
25	Geschaltete 5V nicht vorhanden
26	Bildrohr ist nicht rechtzeitig aufgeheizt
27	Schutzschaltung hat dreimal ausgelöst (wird nur im Service- Mode angezeigt)
28	Vertikal- Schutzschaltung ist aktiv
29	Horizontal- Schutzschaltung ist aktiv
31	Softwarefehler (nur für Produktionsstätten)
32	Softwarefehler (nur für Produktionsstätten)
34	NVM (EEPROM) antwortet nicht
35	5V und 8V nicht vorhanden (Netzspannung zu niedrig/ Power- Fail- Schaltung)
36	Softwarefehler (nur für Produktionsstätten)
37	Unerwarteter Zustand auf NMI- Leitung (z. B. durch Überschlag im Bildrohr)
38	Softwarefehler (nur für Produktionsstätten)
39	I2C Bus Data- Leitung nicht reaktivierbar
41	PDD Flag TDA9178 zu geringe Betriebsspannung
42	POR Flag TDA9321 zu geringe Betriebsspannung
43	POR Flag TDA9330H zu geringe Betriebsspannung
44	NRF Flag TDA9330H Referenz- PLL (Clock) nicht eingerastet
45	FLS Flag TDA9330H Pin 5 ('FLASH')> 2V, Ablenkschutzschaltung aktiv
46	NHF Flag TDA9330H Pin 13 H- Rückschlagimpuls fehlt
47	NDF Flag TDA9330H Pin 9 VERTICAL_ GUARD fehlt oder dauert zu lange
48	XPR Flag TDA9330H Pin 4 Überspannung (> 4V)
49	PSX Flag TDA9321H Quarz (Clock) nicht vorhanden

ÜBERPRÜFUNG SIGNAL-PLATINE


Start
NETZ EIN
Überprüfe ob die LED einen Fehlercode anzeigt; ggf siehe Tabelle Fehlercodes.
Tabelle Fehlercodes
Betriebsspannungen +8V, +8V_1 ,+8V_2 +5V_1 ok ?
Nein
Ja
Überprüfe : 8V_FE: 11 und 45 / IC001 - Betriebsspannungen Tuner : +30V : 9 / Tuner +40V : 5/BR003 +5V : 6 / Tuner
nicht i.O.
Überprüfe Netzteil und Modul-Sicherungen ZR001..4
i.O.
V5D & 3VD3 ok ?
Nein
Überprüfe 3.3V-Regler und IU390, LU303 (Upconverter Stufe)
Ja
Überpr. IR signal 6 / BR001 und 25 / IR001
- Überpr. Clock SCL (2 / BX001) und Data SDA (1 / BX001) - Überprüfe Oscillator: Pins 11/12 IR001
nicht i.O.
Erneuere Signal-Platine
i.O
- Überprüfe H_drive (2/BP005) - Überprüfe V_drive (6/BV001) - Prüfe ob Schutzeingang Pin 5 / IV200 > 2V
Pin 5 IV200 >2V
Nein
Erneuere Signal-Platine
Yes
Überprüfe: - Horizontal Ablenkung (Netzteil- u. Ablenkplatine) - EHT zu hoch. - Ablenkeinheit : Kurzschluß oder Unterbrechung. - Bildrohr - Strahlstrom

WARNING : *Before servicing this chassis read the safety recommendations.*

ATTENTION : *Avant toute intervention sur ce châssis, lire les recommandations de sécurité.*

ACHTUNG : *Vor jedem Eingriff auf diesem Chassis, die Sicherheitsvorschriften lesen.*

ATTENZIONE : *Prima di intervenire sullo chassis, leggere le norme di sicurezza.*

IMPORTANTE : *Antes de cualquier intervención, leer las recomendaciones de seguridad.*

Do not disconnect modules when they are enregized! Repairs on power supply section are to be carried out only with isolating transformer.

Ne pas retirer les modules lorsqu'ils sont sous tension. N'effectuer les travaux de maintenance sur la partie reliée au secteur (Switch Mode) qu'au travers d'un transformateur d'isolement.

Module nicht bei eingeschaltetem Gerät entfernen ! Servicearbeiten am Netzteil nur unter Verwendung eines Regeltrenntrafos durchführen.

Non scollegare i moduli quando sono alimentati! Intraprendere riparazioni sulla sezione alimentatore solo con trasformatore isolante.

No desconectar los módulos cuando están activados. Las reparaciones en la sección de alimentación de energía deben ser ejecutadas solamente con un transformador de separación.

⚠ Indicates critical safety components, and identical components should be used for replacement. Only then can the operational safety be garanteed.

Le remplacement des éléments de sécurité (repérés avec le symbole ⚠) par des composants non homologués selon la Norme CEI 65 entraine la non-conformité de l'appareil. Dans ce cas, la responsabilité du fabricant n'est plus engagée.

Wenn Sicherheitsteile (mit dem Symbol⚠ gekennzeichnet) nicht durch Original - Ersatzteile ersetzt werden, erlischt die Haftung des Herstellers.

La sostituzione degli elementi di sicurezza (marcati con il segno⚠) con componenti non omologati secondo la norma CEI 65 comporta la non conformitá dell'apparecchio. In tal caso è "esclusa la responsabilità " del costruttore.

La sustitución de elementos de seguridad (marcados con el simbolo ⚠) por componentes no homologados segun la norma CEI 65, provoca la no conformidad del aparato. En ese caso, el fabricante cesa de ser responsable.

Note : During measurements in the power supply unit, use the primary power unit ground (Emit. TP060).

Attention : Mesures dans le bloc alimentation. Utiliser la masse du bloc alimentation (Emet. TP060).

Achtung : Bei Messungen im Primärnetzteil. Primärnetzteilmasse verwenden (Emit. TP060).

Attentionze : Misure nell'alimentatore primario. Usare massa alimentazione primario (Emet. TP060).

Cuidado : Medida en el bloque de alimentación. Utilizar la masa del bloque de alimentación (Emet. TP060).

MEASUREMENT CONDITIONS - CONDITIONS DE MESURES - MESSBEDINGUNGEN CONDIZIONI DI MISURA - CONDICIONES DE MEDIDAS

RECEIVER :
Bar test pattern : PAL, I standard, 100% white.

- On UHF, input level 1 mV
- Via the scart socket, input level 1 Vpp

Colour, contrast and brightness at mid-position, sound at minimum.
Programme selected : PR 01.
DC voltages measured between the point and earth using a digital voltmeter.

RECEPTEUR :
Mire de barres : SECAM, Norm L, Blanc 100%.

- En UHF, niveau d'entrée 1 mV
- Par la prise Péritélévision, niveau d'entrée 1Vcc.

Couleur, contraste, lumière à mi-course, son minimum.
Programme affecté PR 01.
Tensions continues relevées par rapport à la masse avec un voltmètre numérique.

EMPFÄNGER :
Farbbalken : PAL, Norm G, Weiss 100%

- Bei UHF Eingangspegel 1 mV.
- Über die Scartbuchse : Eingangspegel 1 Vss.

Farbe, Kontrast, Helligkeit in der Mitte des Bereichs, Ton auf Minimum.
Zugeordnetes Programm PR 01.
Gleichspannungen mit einem digitalen Voltmeter zur Masse gemessen.

RICEVITORE :
Monoscopio per barre : PAL, norma G. bianco 100%.

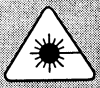
- In UHF, livello d'entrata 1 mV,
- Per la presa SCART, livello d'entrata 1 Vcc.

Colore, Contrasto, Luce a metä corsa, Suono minimo.
Programma designato PR 01.
Tensioni continue rilevate rispetto alla massa con un voltametro numerico.

RECEPTOR :
Mira de barras : PAL, norma G, blanco 100%.

- En UHF, nivel de entrada 1 mV,
- Por la toma Peritelevision, nivel de entrada 1 Vpp.

Color, Contraste, luz a mitad de carrera, Sonido minimo.
Programa afectado PR 01.
Tensiones continuas marcadas en relacion a la masa con un voltimetro digital.



CLASS 1 LASER PRODUCT
APPAREIL A LASER DE CLASSE 1
LASER KLASSE 1
APARATO CON LASER DE CLASE 1
APPARECCHIO CON LASER DI CLASSE 1

DANGER : **Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.**

ATTENTION : **Le rayon laser est invisible. Eviter l'exposition directe lors de la maintenance.**

VORSICHT BEI REPARATUREN : **Bei geöffneter Schublade und Defekt der Sicherheits - vorrichtungen besteht die Gefahr unsichtbaren Laserlichts. Niemals direkt in den Laserstrahl sehen.**

ATTENZIONE : **Il raggio laser è invisibile. Evitare l'esposizione diretta durante la manutenzione.**

IMPORTANTE : **El rayo laser es invisible. Evitar la exposición directa en el momento del mantenimiento.**

PREVENTION OF ELECTRO STATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE DEVICES (ESD)

Some semiconductor (solid state) devices can be damaged easily by static electricity.
Such components commonly are called Electrostatically Sensitive Devices (ESD). Examples of typical ESD devices are integrated circuits and some field-effect transistors and semiconductor chip components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ESD devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ESD devices.
4. Use only an anti-static solder removal devices. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESD devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESD devices.
6. Do not remove a replacement ESD device from its protective package until immediately before your are ready to install it. (Most replacement ESD devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive materials).
7. Immediately before removing the protective materials from the leads of a replacement ESD device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ESD devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ESD device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are imporant for safety, these part are marked by ⚠ symbol on the schematic circuit diagrams and replacement part list. It is essential that these safety critical components are replaced with the manufacture's specified parts to prevent electric shock, fire, or other hazards. do not attempt to modify the original design without permission of the manufacturer.

DVD PLAYER REMOVAL - DEPOSE DU LECTEUR DVD - AUSBAU DES DVD-SPIELERS RIMOZIONE DEL DVD - RETIRADA DEL REPRODUCTOR DVD

GB

1 - Carefully remove the connexion cable between the TV chassis and the DVD player
2 - Disengage the TV chassis.
3 - Remove the screws (1) and lift off the DVD player (2) (Fig.1).

F

1 - Déconnecter les cables de liaison entre le chassis TV et le lecteur de DVD player.
2 - Dégager le TV chassis.
3 - Retirer les trois vis de fixation (1) et déposer le lecteur de DVD (2) (Fig.1).

D

1 - Entfernen Sie vorsichtig das Verbindungskabel zwischen dem TV-Chassis und dem DVD-Player
2 - Nehmen Sie das TV-Chassis aus dem Gehäuse.
3 - Entfernen Sie die Schrauben (1) und heben Sie den DVD-Spieler heraus (2) (Fig.1).

I

1 - Rimuovere con cura il cavo di connessione tra il telaio e il DVD.
2 - Sfilare il telaio TV.
3 - Tolgliere le viti (1) e estrarre il DVD (Fig.1).

E

1 - Retirar con cuidado el cable de conexión entre el chasis TV y el reproductor DVD.
2 - Desenganchar el chasis TV.
3 - Retirar los tornillos (1) y leventar verticalmente el reproductor DVD (2) (Fig.1).

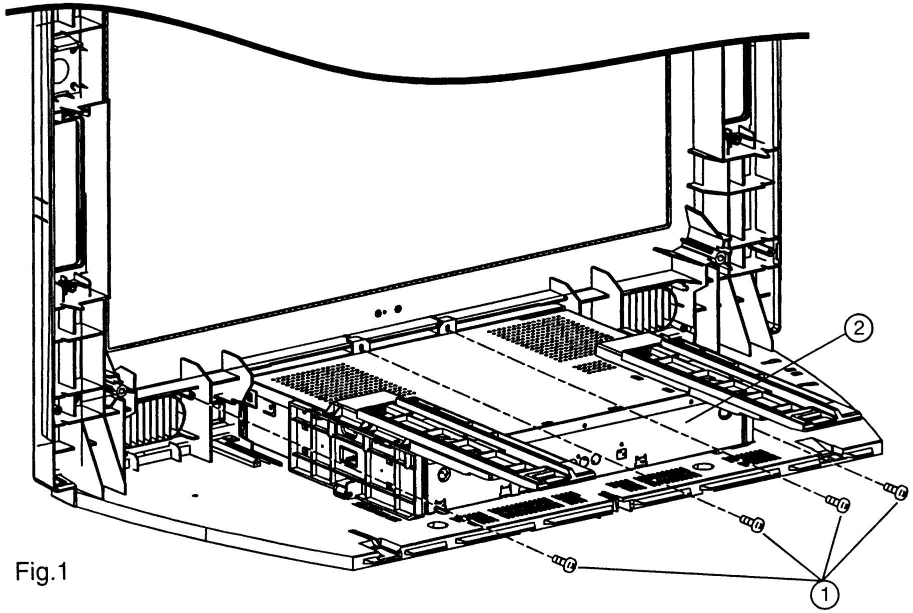


Fig.1

ADJUSTMENT PROCEDURES

Note: for the maintenance, it is possible to activate the DVD module as a standalone unit, see page 5.

1. Handling the optical pickup

The laser diode used in the optical pickup may break down due to potential differences caused by electricity produced by clothing or the human body, care should therefore be taken to prevent electrostatic discharge whilst repairing the optical pickup.

The following method is recommended.

1) Place a conductive sheet on the work bench (The black sheet used for wrapping repair parts.)
2) Place the set on the conductive sheet so that the chassis is grounded to the sheet.
3) Place your hands on the conductive sheet (doing this gives them the same ground as the sheet.
4) Remove the optical pickup block
5) Perform work on top of the conductive sheet. Be careful not to let your clothes or any other static sources to touch the unit.

* Grounding the Human Body, use an antistatic wrist strap to discharge static electricity from your body.

* Grounding the work place, use either an antistatic matt or a sheet of steel on the area where the optical pickup is to be placed and ground the matt/sheet.

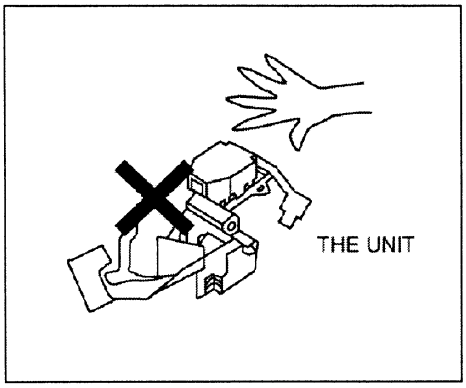


Fig. 1-1

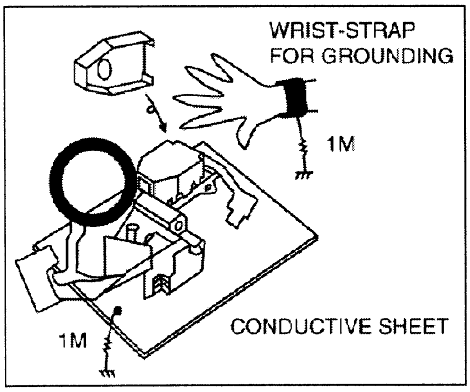


Fig. 1-2

6) Short the short terminal Ⓐ on the PCB, which is in-side the Pickup Assembly, before deconnecting the flexible cable Ⓑ for replacing the Pickup. (The short terminal is shorted when the Pickup Assembly is being lifted or moved.)

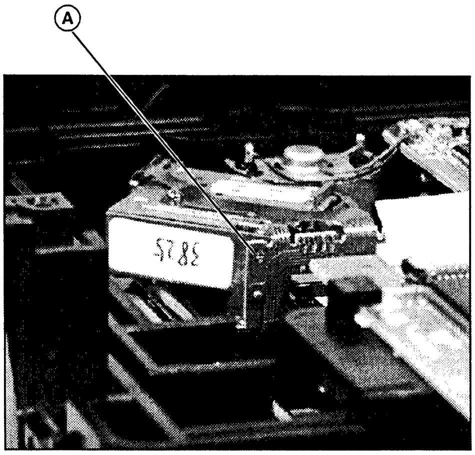


Fig. 1-3

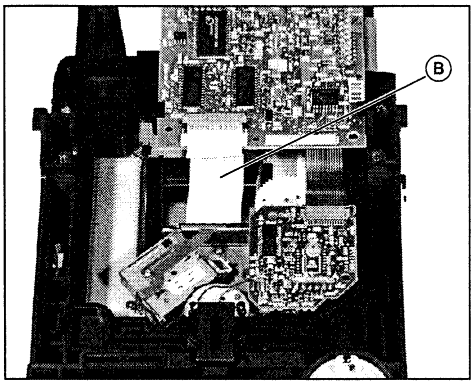


Fig. 1-4

(7) After replacing the Pickup, open the short terminal on the PCB.

2. Disassembly and assembly

Note : Reassemble in reverse order.

2.1 Removing the top cabinet

1) Remove the 3 screws of the right bracket. Pull the clip (01) in the direction of arrow Ⓒ, then push the bracket in the direction of arrow Ⓓ.
2) Perform the same operation for the left bracket.
3) Remove the screw on the back of the top cabinet
4) Lift the top cabinet up.

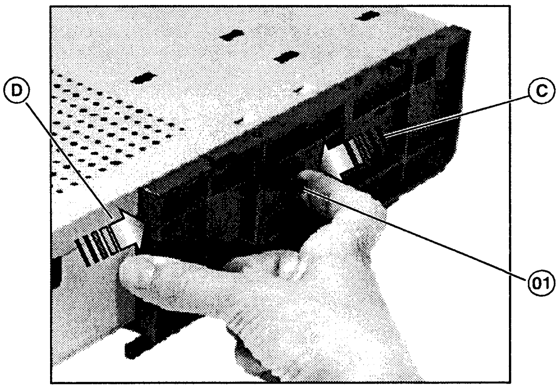


fig 2.1

2-2 Removing the door-tray

1) Switch the power on and open the tray.
2) Remove the door-tray.
3) Close tray and switch the power off.

Note : If the tray cannot be opened, insert a screw driver into the plastic slot accessible through emergency hole ② (as shown below) and push it in the direction of arrow Ⓔ Open the tray manually.

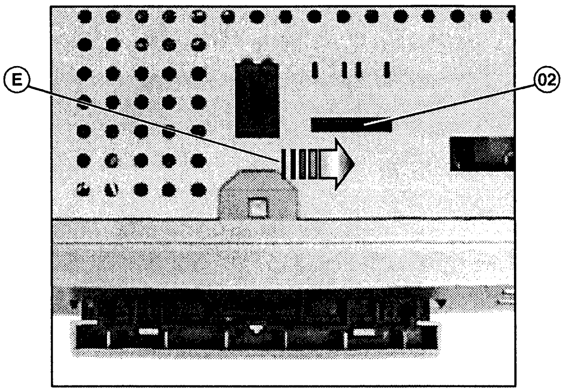


fig 2.2

2-3 Removing the front panel

1) Disengage the 3 clips located under the set and the 2 clips located on both sides of the front panel.
2) Remove connector BK225 between the main board and KDB1.
3) Dismount the Front panel.

2-4 Removing the tray

1) Remove two screws ③ .
2) Disengage 4 clips ④ .
3) Remove cover ⑤ .
4) Open and pull the tray.

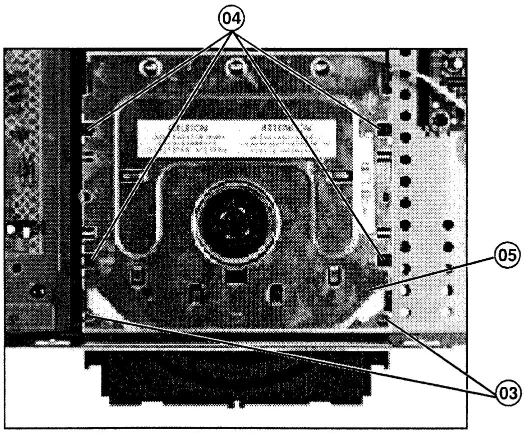


fig 2.4.1

2-5 Removing the mechanical assembly

1) Disconnect BU702 ⑥ and ground cable ⑦ .

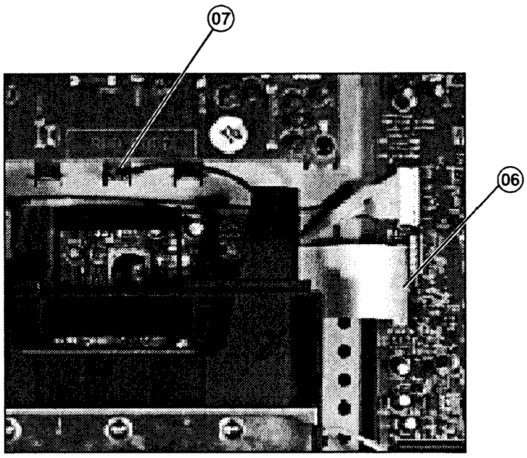


fig 2.5.1

2) Remove two screws ⑧ .
3) Disengage clip ⑨ .

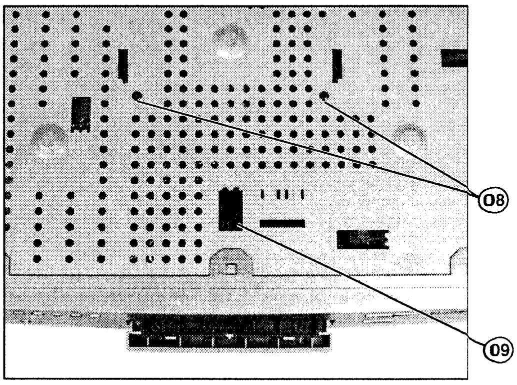


fig 2.5.2

4) Disengage 2 clips ⑩.

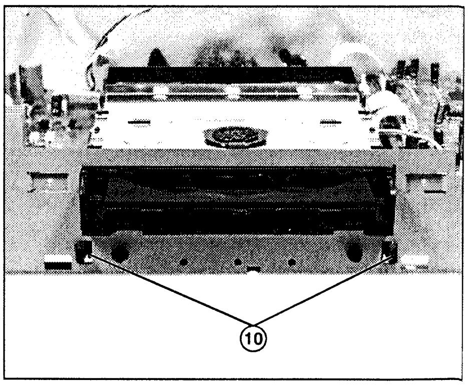
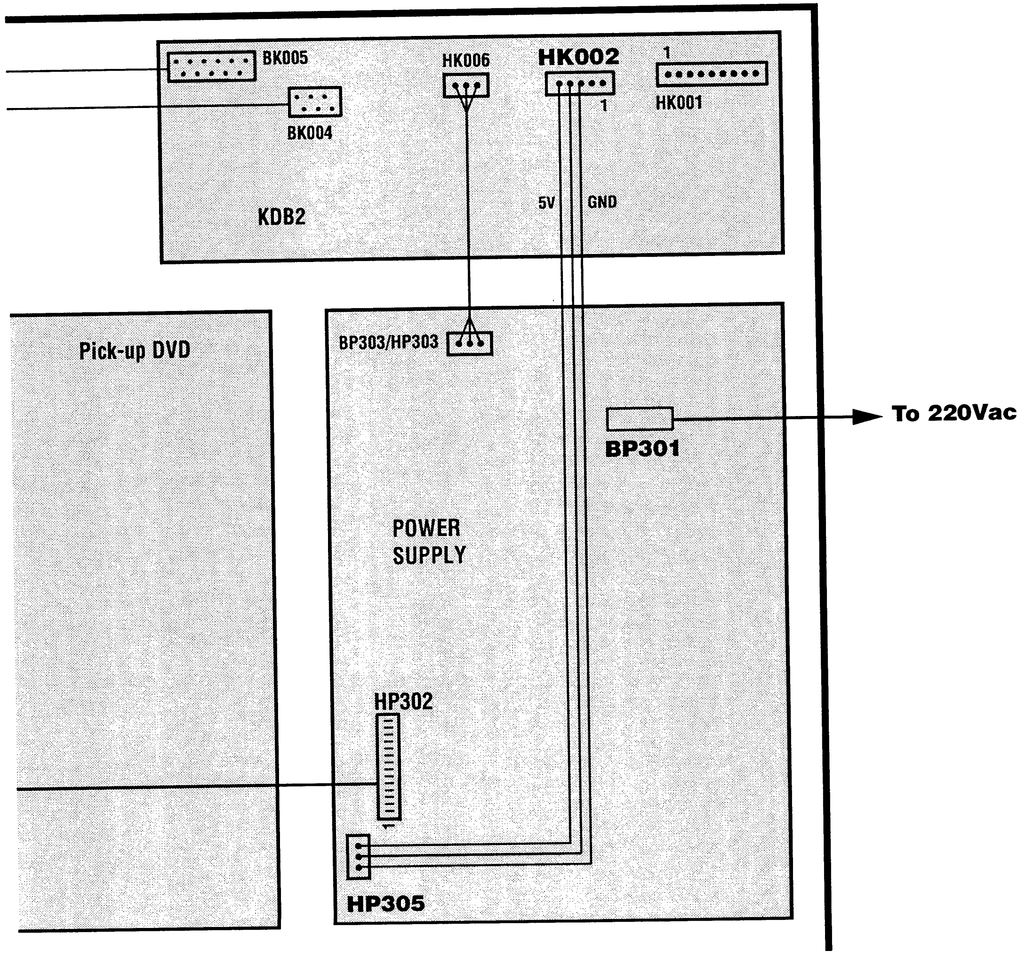


fig 2.5.3

5) Push the mechanical assembly backward and lift it up.

1) Connect BP301 to the mains (220Vac),
2) Connect HP305 (three wires cable with female connector from DVD power board) to HK002 (Three wires cable with male connector from KDB2 board) to supply 5V and GND to the KDB board (see diagram below),
3) To activate the DVD module as a standalone unit, press on the front keyboard, the three keys "MENU", "STOP" and "OK", simultaneously during at least 5 seconds. Then the DVD module can be controlled by the front keyboard or the RCU.

Note: the step 3 must be repeated each time the mains is switched off and switched on.


BK005
HK006
HK002
1
HK001
1
BK004
KDB2
5V
GND
Pick-up DVD
BP303/HP303
To 220Vac
BP301
POWER
SUPPLY
HP302
HP305

RUNNING POWER SUPPLY IN STAND ALONE CONDITION

All of the following tests must be carried out with the MAINS switched OFF.

Any operations carried out with the MAINS switched ON may lead to components being destroyed.

With the following configuration it is possible to start the power supply in stand alone function.

- Disconnect mains.
- Remove connector BP005 and BL111.
- Make a connection between pin 18 (PO) of BP005 to GND .
- Connect pin 21 (CNT2_20V) of BP005 to cathode of DP120 (+20V).
- Connect a resistor 12R0/5W between +5V and GND.
- Connect a resistor 18R0/5W between +8V and GND.
- Connect a resistor 4k0/10W between USYS and GND.

ONLY NECESSARY IF NO CRT BOARD CONNECTED

- Connect mains .
- Switch «ON».
- Remove connection between pin 18 (PO) of BP005 and GND.

- Measure the following voltages :

Voltage	Value
Usyst (C / DP110) (G/7)*	185V +/-10V
+20V (C / DP120) (G/5)*	25.5V =/- 1V
+10V (C / DP140) (G/6)*	11.5V +/-0.6V
+8V (C / DP194) (H/1)*	8.15V +/-0.25V
+6V (C / DP150) (F/5)*	6.1V +/-0.2V
+5V (A / DP152) (H/3)*	5.1V +/-0.15V
+UA (C / DP130) (F/9)*	22V +/2V
-UA (A / DP135 (J/8)*	-20V+/-2V

(*) Components location reference

NOTE : Don't forget to remove all additionnal loads, the connection between pin 21 of BP005 and +20V and reconnect BP005, BL111 after stand alone function.

GENERAL INFORMATION

METHODOLOGY

1 - SWITCHING "ON" THE TV:

- Observe the behaviour of the two-coloured LED: note the various stages and compare them with the normal cycle of events.

By watching this, the point at which the problem arises and the part of the circuit which needs to be investigated cab be identified.

2 - TROUBLESHOOTING PROCEDURE : LED BEHAVIOUR :

In certain cases a flashing LED signifies the transmission of an error code message:

LED flashes : Message transmission.
- Count the flashes : coded into bursts separated by a pause of 0.7s and repeated several times. répétées plusieurs fois.

See the ***ERROR CODE TABLE***.

3 - FAULT FINDING :

The ICC20 chassis being equiped with two main boards it is necessary to identify in a first time the defective board and what security is available.

After the check of the ***GOOD CONNECTION BETWEEN THE TWO MAIN BOARDS***

- Operation stages 1 and 2:

a - The chassis set operates fully or partially:
- Use LED message observation fault finding methods 1 and 2.

see also the fault related to fault finding by "***Symptom*** ".

b **- The chassis set goes into permanent or cyclical security mode** :
b.1- **Observe LED behaviour** (flashing red, stable orange followed by flashing, etc...)
Select the relevant box in the column : " ***LED behavior fault finding*** ".

See the Error Code Table information.
For example :
Three attemps to switch on the power supply before standby :

- Error code 25 : +5V not available
- Error Code 35 : +5V and +8V not available.
- error Code 37 : No correct level on the NMI (POWER FAIL) line

indicate a problem of "***POWER / SCAN BOARD*** ".
Please Note :
These information give only an indication because, they don't display all the cases : since various fault generates the same error code or signale a secondary effect relative to the "***SMALL SIGNAL BOARD***" for example.

In the service mode, it is possible to consult a record of the latest error codes which have occured in the television set.

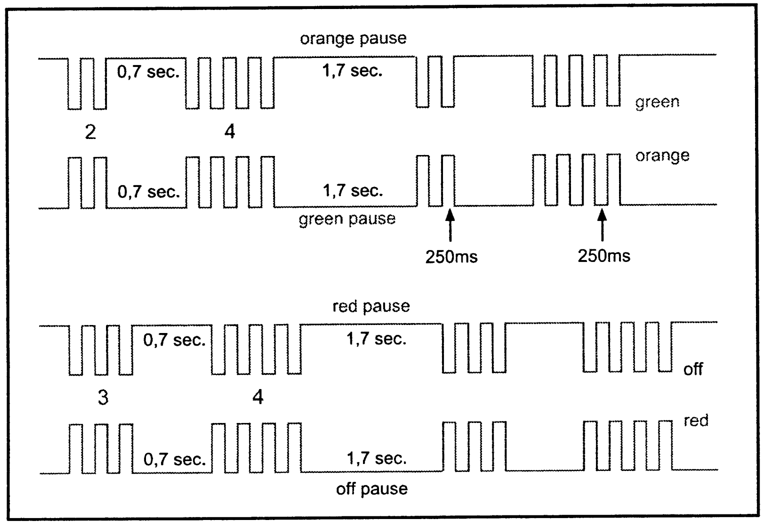
b.2- **LED stays off** :
Make beforehand the diagnosis of the "***POWER / SCAN BOARD*** ".

GENERAL INFORMATION - LED BEHAVIOUR

LED FLASHES

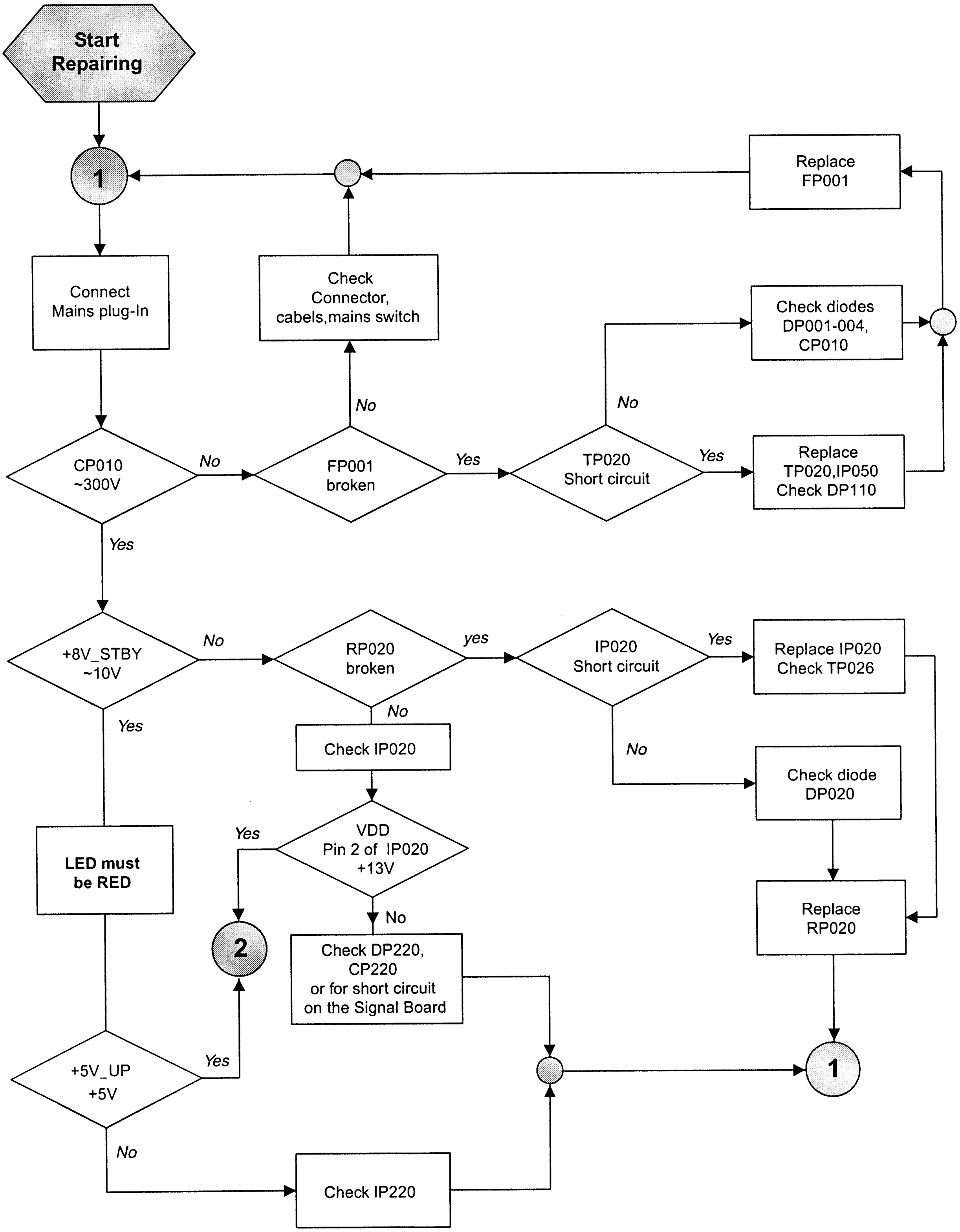
Message transmission.
The Error codes are signalled by the RED Standby LED.

Count number of flashes : error code is signalled in two burst separated by a 0.7 s pause and repeated several times.
There is 1.7 s between each code sequence .

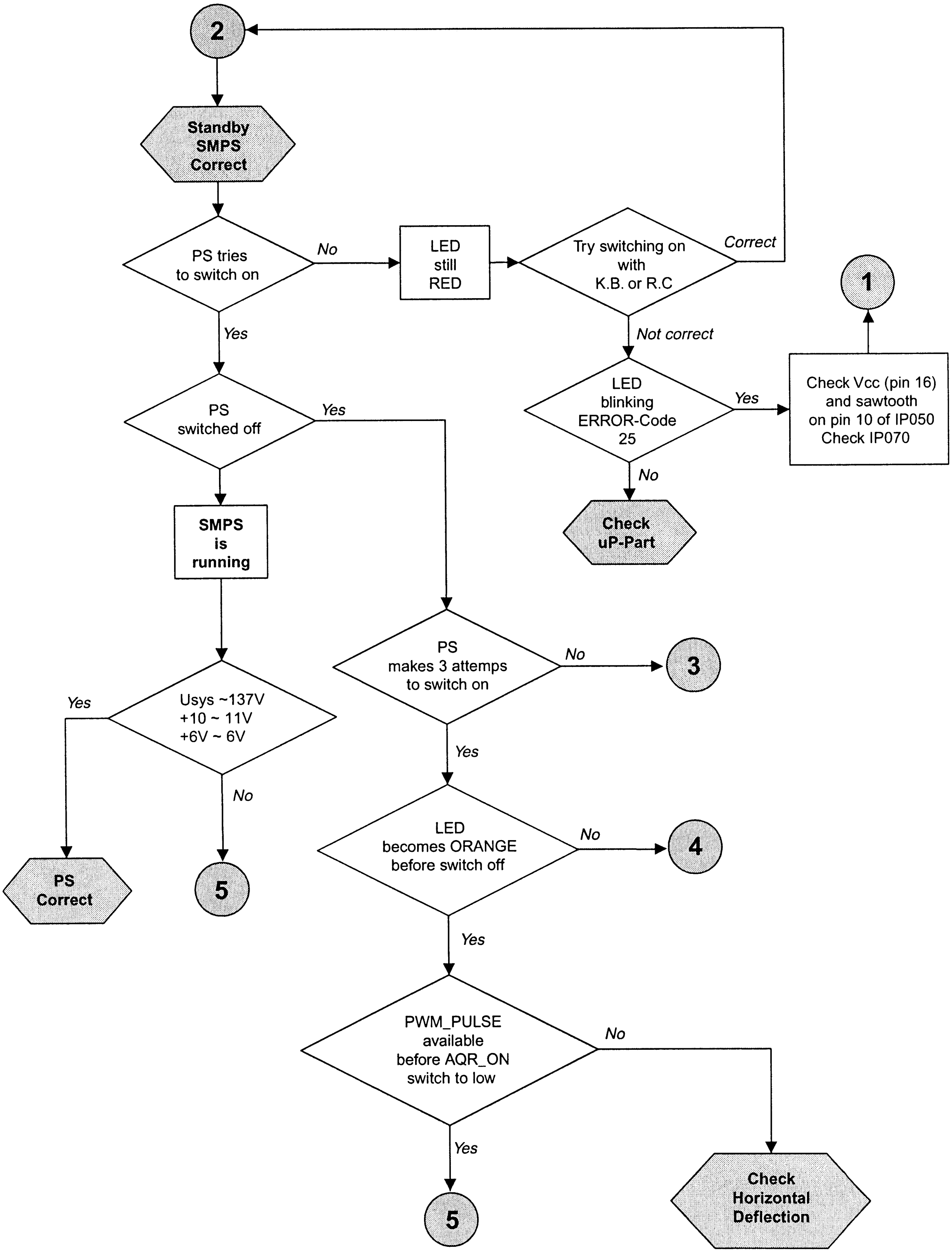


CODES	DEFAULT
10	Display effective child lock mode
11	Display timer mode
12	Audio-MSP doesn't answer anymore
13	Audio-Dpl doesn't answer anymore
14	TDA9330H doesn‘t answer anymore
15	TDA9321 doesn‘t answer anymore
16	DMU0 doesn't answer anymore
17	SAA4956 doesn't answer anymore
18	TDA9178 doesn't answer anymore
19	Tuner doesn't answer anymore
20	I2C Bus is loocked
21	I2C Bus data line held low
23	I2C Bus clock line held low
25	Switched 5V not available
26	Tube gets not warm in time
27	Deflection detects >3 times prot
28	Vertical deflection safety is effective
29	Horizontal deflection safety is effective
31	Call with pointer that was not allocated
32	A software-timer has been requested but isn't available yet
34	The NVM chip doesn't answer anymore
35	5V and 8V not available
36	Wrong address passed to the bus-handler
37	Unexpected level on NMI line found
38	Heap full - There is no RAM available for the requested operation
39	I2C Bus data line not recoverable
41	Power down detection TDA9178 (PSI)
42	Power on reset error TDA9320 (HIP)
43	Power on reset error TDA9330 (HOP)
44	NRF bit problem (only factory information)
45	FLS bit problem (only factory information)
46	NHF bit problem (only factory information)
47	NDF bit problem (only factory information)
48	XPR bit problem (only factory information)
49	Problem with bits SXA...D (factory information)

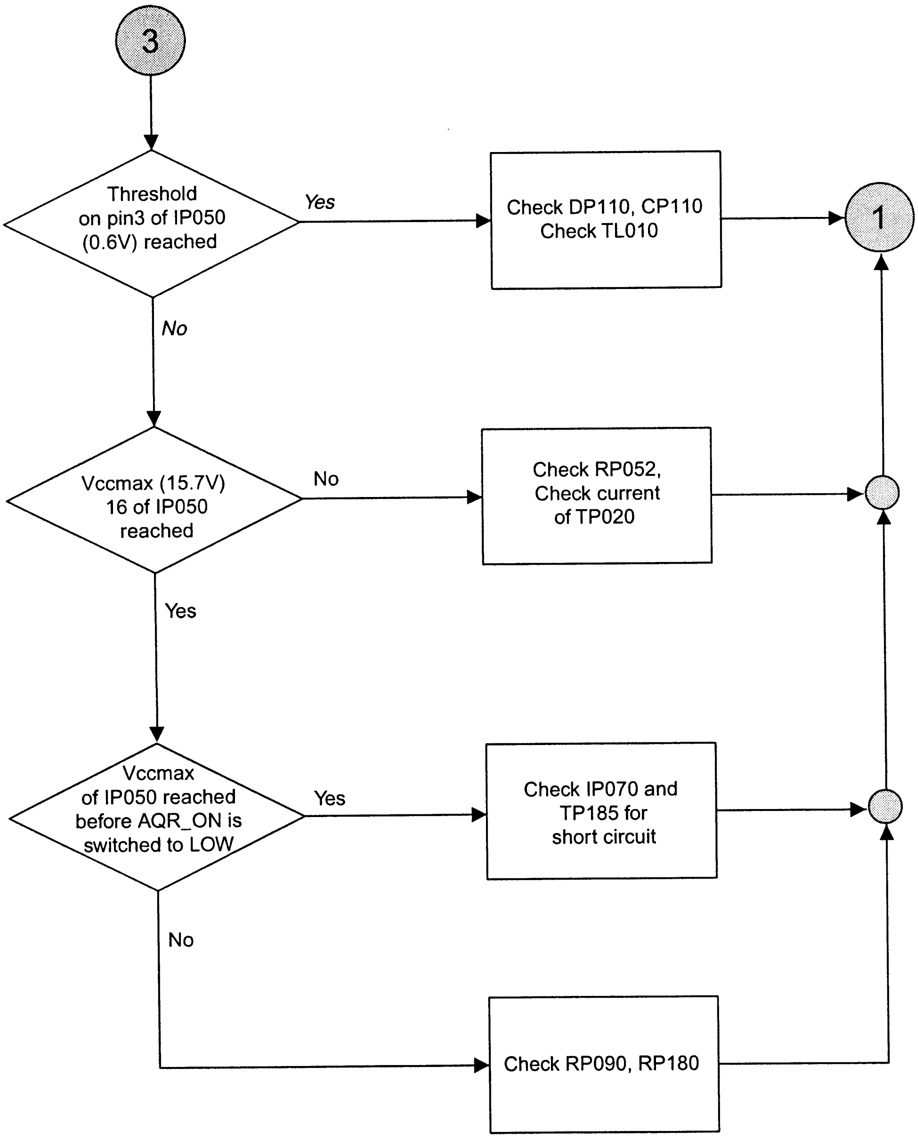
MAIN POWER SUPPLY CHECK


Start Repairing
1
Replace FP001
Connect Mains plug-In
Check Connector, cabels,mains switch
Check diodes DP001-004, CP010
No
No
CP010 ~300V
No
FP001 broken
Yes
TP020 Short circuit
Yes
Replace TP020,IP050 Check DP110
Yes
+8V_STBY ~10V
No
RP020 broken
yes
IP020 Short circuit
Yes
Replace IP020 Check TP026
Yes
No
Check IP020
No
Check diode DP020
Yes
VDD Pin 2 of IP020 +13V
LED must be RED
No
2
Check DP220, CP220 or for short circuit on the Signal Board
Replace RP020
+5V_UP +5V
Yes
1
No
Check IP220

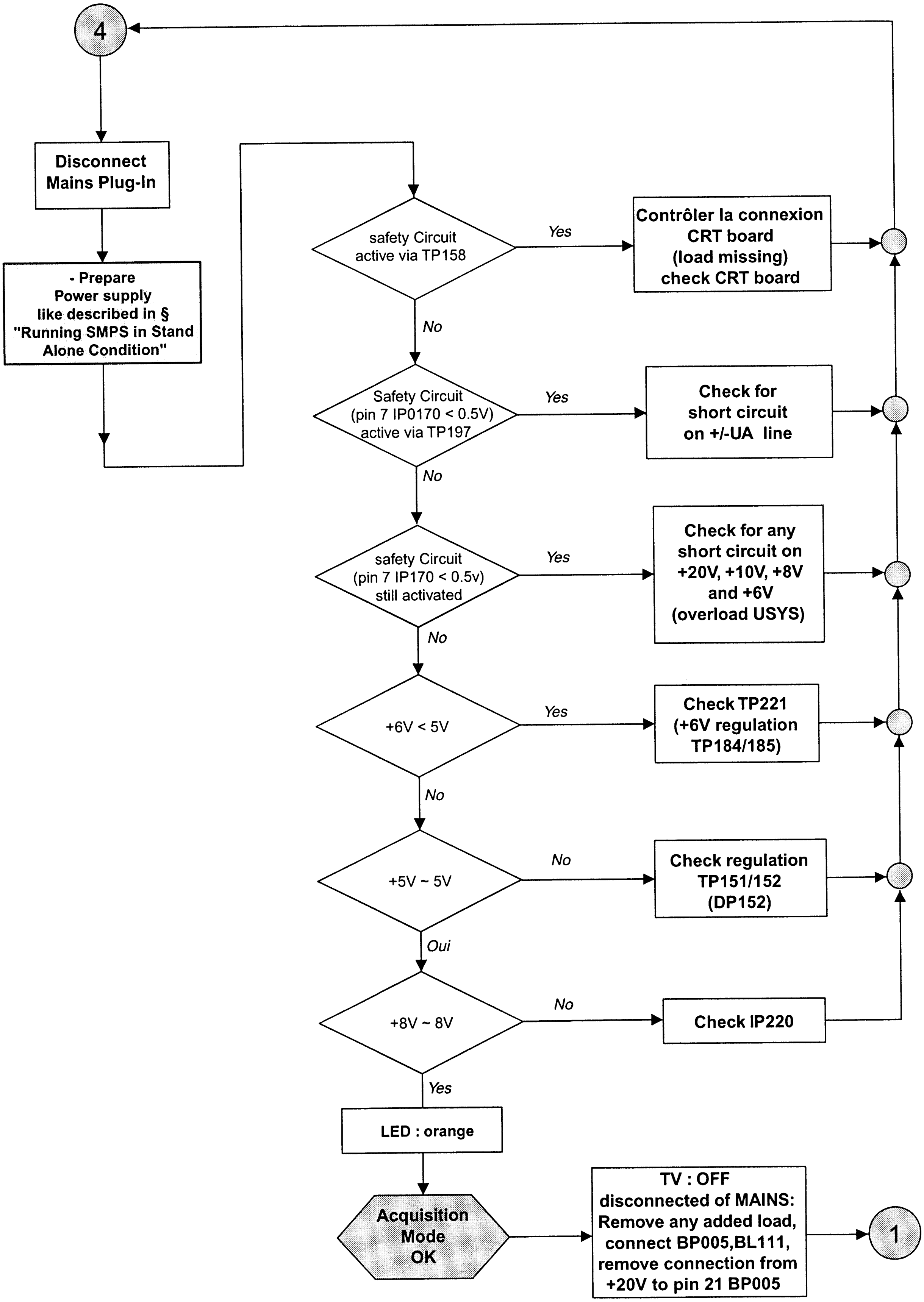
MAIN POWER SUPPLY CHECK


2
Standby SMPS Correct
PS tries to switch on
No
LED still RED
Try switching on with K.B. or R.C
Correct
1
Yes
Not correct
LED blinking ERROR-Code 25
Yes
Check Vcc (pin 16) and sawtooth on pin 10 of IP050 Check IP070
No
Check uP-Part
PS switched off
Yes
SMPS is running
PS makes 3 attemps to switch on
No
3
Yes
Usys ~137V +10 ~ 11V +6V ~ 6V
No
PS Correct
5
Yes
LED becomes ORANGE before switch off
No
4
Yes
PWM_PULSE available before AQR_ON switch to low
No
Yes
5
Check Horizontal Deflection

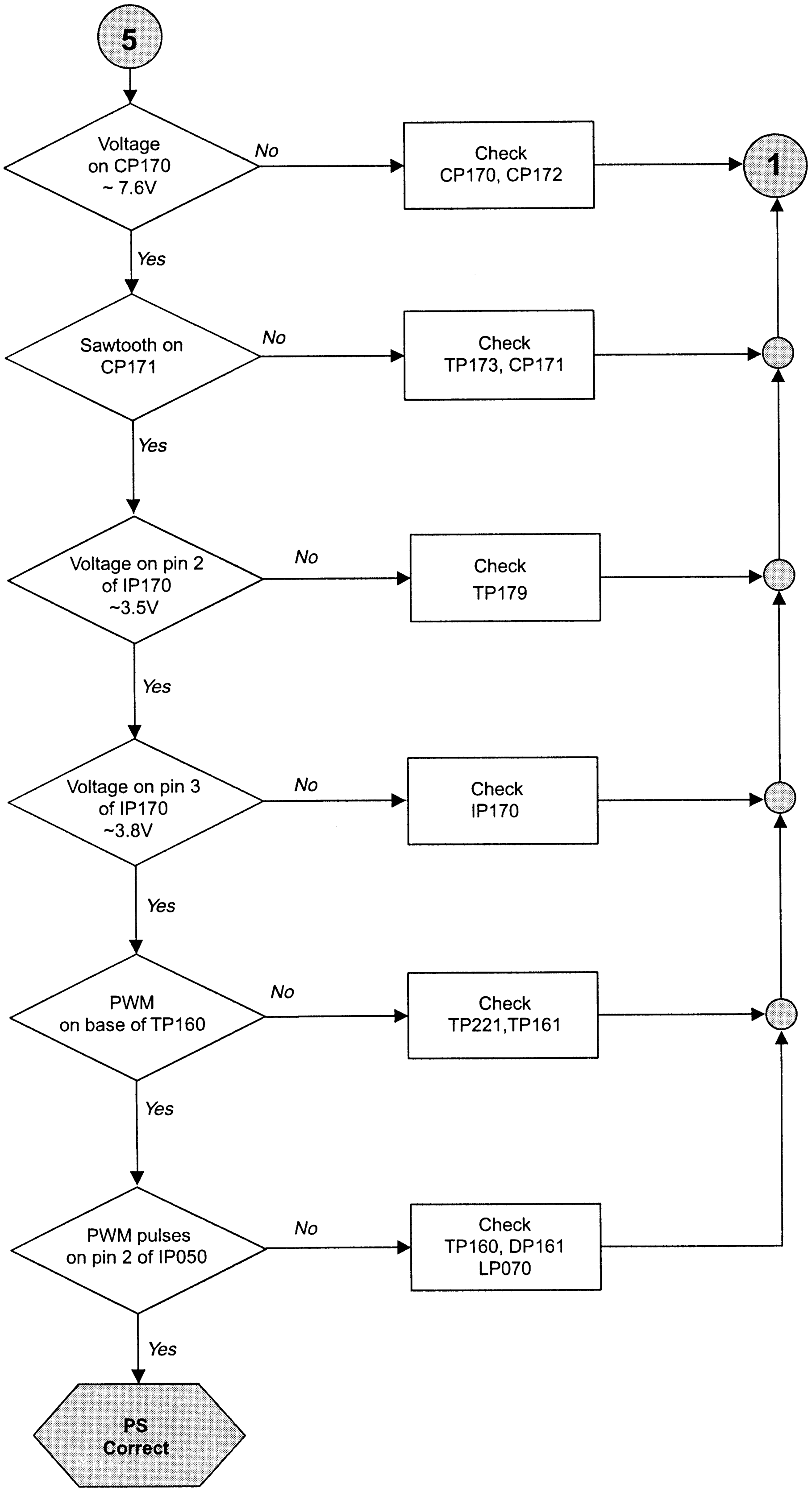
MAIN POWER SUPPLY CHECK


3
Threshold on pin3 of IP050 (0.6V) reached
Yes
Check DP110, CP110
Check TL010
1
No
Vccmax (15.7V) 16 of IP050 reached
No
Check RP052,
Check current of TP020
Yes
Vccmax of IP050 reached before AQR_ON is switched to LOW
Yes
Check IP070 and TP185 for short circuit
No
Check RP090, RP180

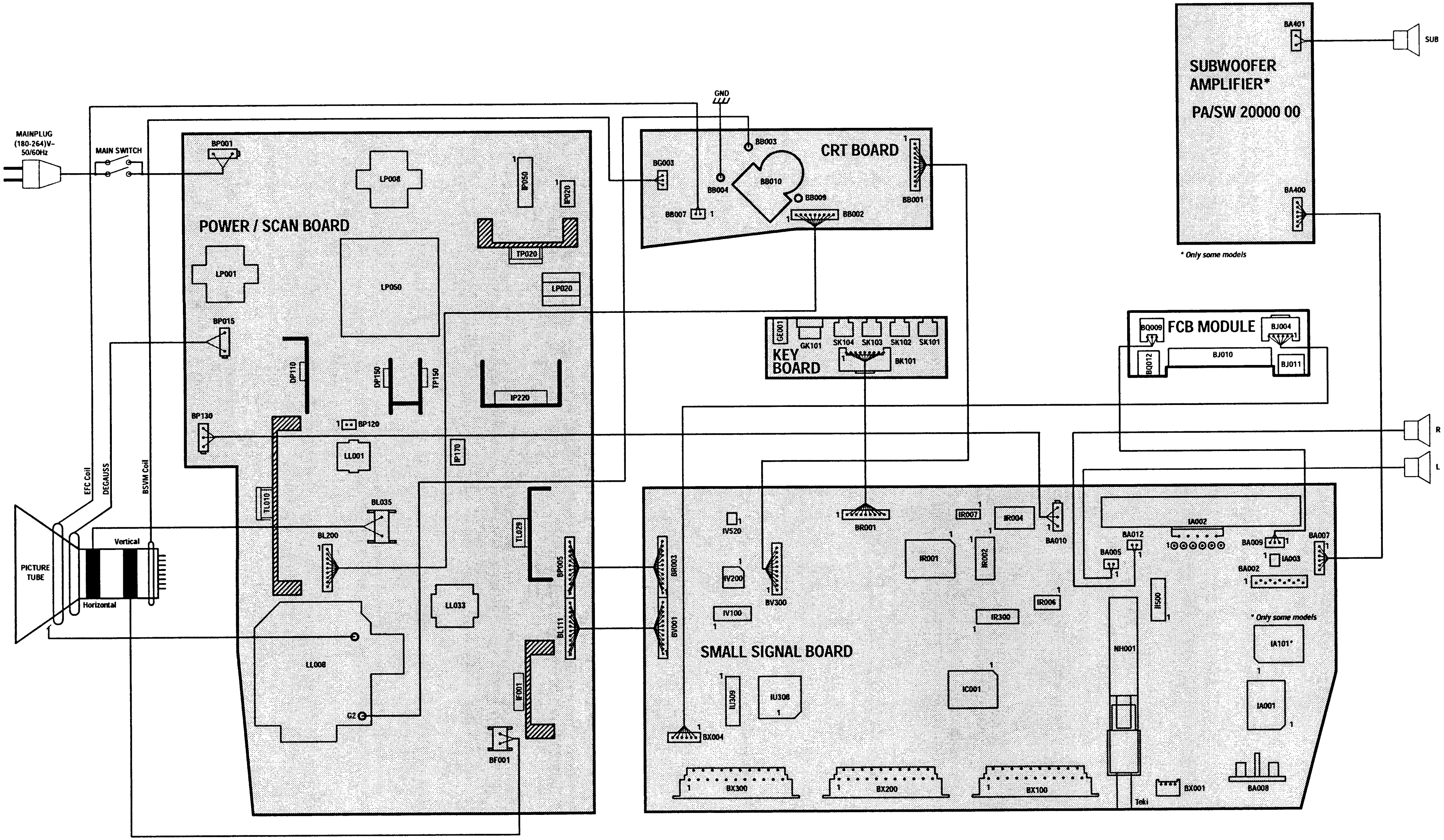
MAIN POWER SUPPLY CHECK


4
Disconnect Mains Plug-In
- Prepare Power supply like described in § "Running SMPS in Stand Alone Condition"
safety Circuit active via TP158
Yes
Contrôler la connexion CRT board (load missing) check CRT board
No
Safety Circuit (pin 7 IP0170 < 0.5V) active via TP197
Yes
Check for short circuit on +/-UA line
No
safety Circuit (pin 7 IP170 < 0.5v) still activated
Yes
Check for any short circuit on +20V, +10V, +8V and +6V (overload USYS)
No
+6V < 5V
Yes
Check TP221 (+6V regulation TP184/185)
No
+5V ~ 5V
No
Check regulation TP151/152 (DP152)
Oui
+8V ~ 8V
No
Check IP220
Yes
LED : orange
Acquisition Mode OK
TV : OFF disconnected of MAINS: Remove any added load, connect BP005,BL111, remove connection from +20V to pin 21 BP005
1

MAIN POWER SUPPLY CHECK

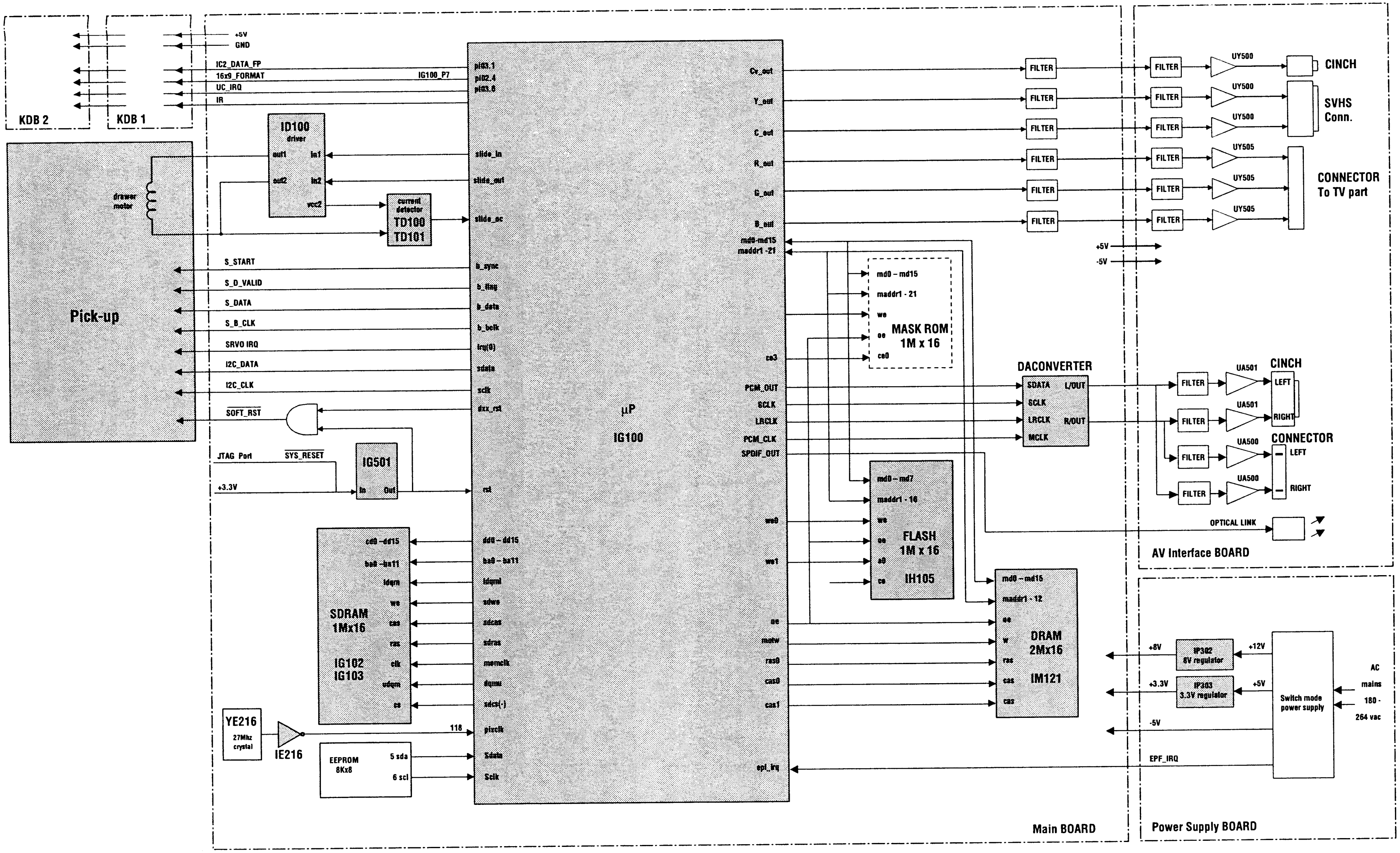

5
Voltage on CP170 ~ 7.6V
No
Check CP170, CP172
1
Yes
Sawtooth on CP171
No
Check TP173, CP171
Yes
Voltage on pin 2 of IP170 ~3.5V
No
Check TP179
Yes
Voltage on pin 3 of IP170 ~3.8V
No
Check IP170
Yes
PWM on base of TP160
No
Check TP221,TP161
Yes
PWM pulses on pin 2 of IP050
No
Check TP160, DP161 LP070
Yes
PS Correct

WIRING DIAGRAM - SCHEMA D'INTERCONNEXIONS - VERDRAHTUNGSPLAN - DIAGRAMMA DELLE INTERCONNESSIONI - ESQUEMA DE INTERCONEXIONES

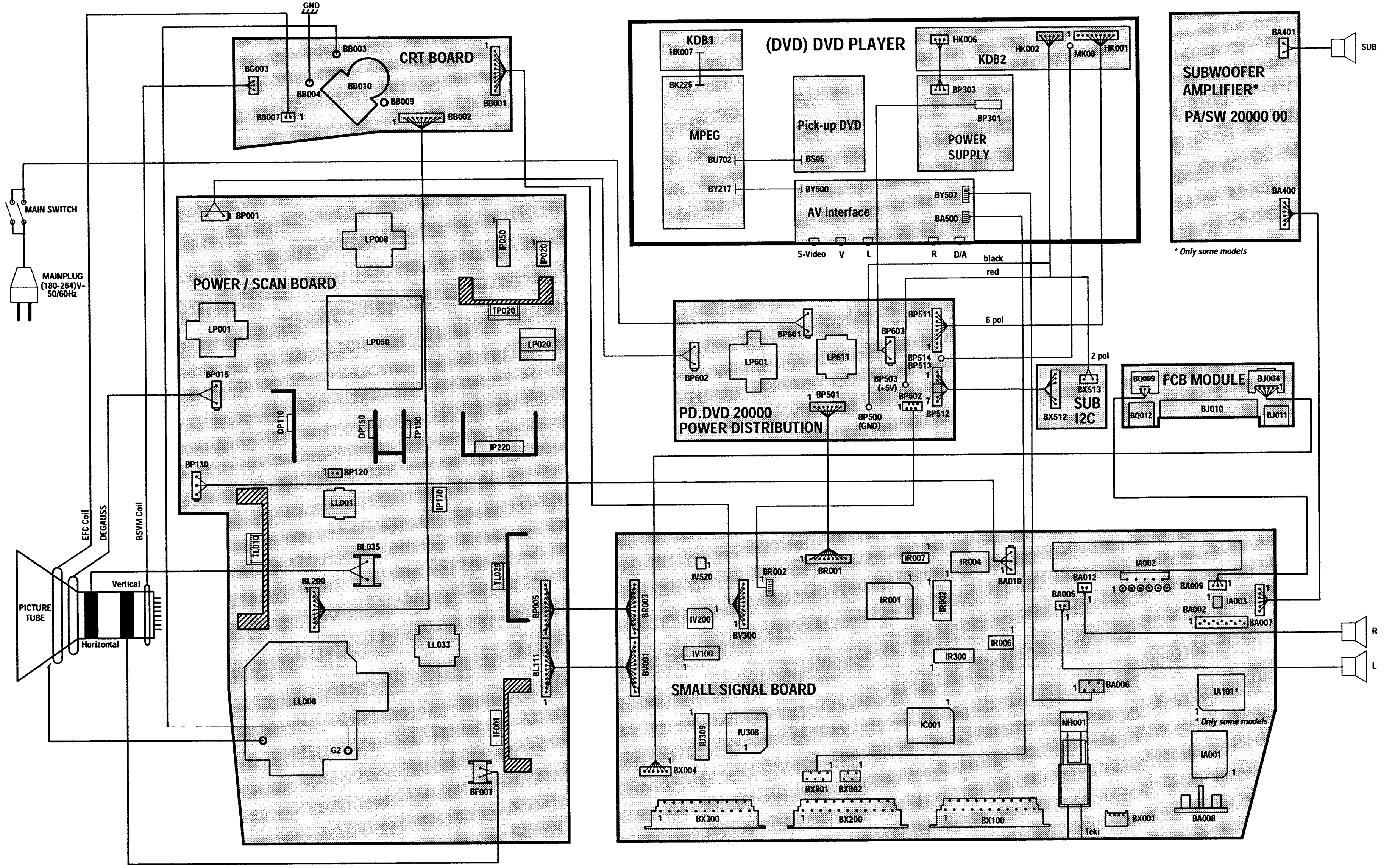

MAINPLUG
(180-264)V~
50/60Hz
MAIN SWITCH
POWER / SCAN BOARD
BP001
LP008
IP050
IP020
TP020
LP001
LP050
LP020
BP015
DP110
DP150
TP150
IP220
BP130
BP120
LL001
IP170
TL010
BL035
BL200
TL028
BP005
BL111
LL033
LL008
G2
IF001
BF001
EFC Coil
DEGAUSS
BSVM Coil
Vertical
Horizontal
PICTURE TUBE
GND
CRT BOARD
BB003
BG003
BB004
BB010
BB009
BB002
BB007
BB001
KEY BOARD
GE001
GK101
SK104
SK103
SK102
SK101
BK101
SUBWOOFER AMPLIFIER*
PA/SW 20000 00
BA401
BA400
SUB
* Only some models
FCB MODULE
BQ009
BJ004
BQ012
BJ010
BJ011
R
L
SMALL SIGNAL BOARD
BR003
BV001
IV520
IV200
IV100
BV300
BR001
IR007
IR004
BA010
IR001
IR002
IR006
IR300
IA002
BA012
BA005
BA009
BA007
IA003
BA002
IR500
NH001
* Only some models
IA101*
IA001
IU309
IU308
IC001
BX004
BX300
BX200
BX100
BX001
BA008
Teki

ICC20
First issue 05 / 00

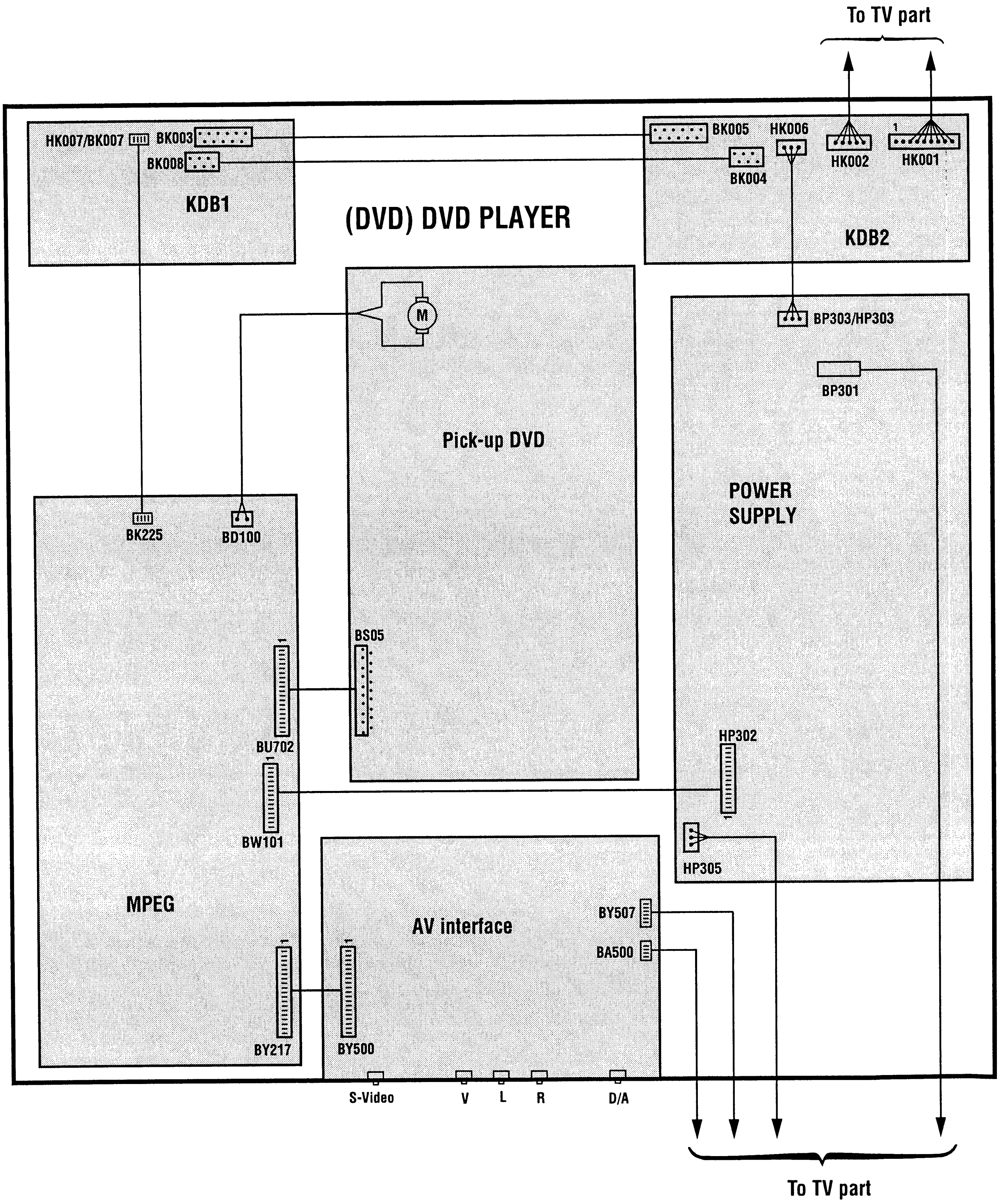
GENERAL BLOCK DIAGRAM - SYNOPTIQUE GÉNÉRAL - BLOCKSCHALTBILD ALLGEMEIN - SCHEMA A BLOCCHI GENERALE - ESQUEMA DE BLOQUES GENERAL


KDB 2
KDB 1
+5V
GND
IC2_DATA_FP
16x9_FORMAT
UC_IRQ
IR
IG100_P7
pio3.1
pio2.4
pio3.6
ID100
driver
out1
in1
out2
in2
vcc2
current detector
TD100
TD101
drawer motor
slide_in
slide_out
slide_oc
Pick-up
S_START
S_D_VALID
S_DATA
S_B_CLK
SRVO IRQ
I2C_DATA
I2C_CLK
SOFT_RST
b_sync
b_flag
b_data
b_bclk
irq(0)
sdata
sclk
dxx_rst
JTAG Port
SYS_RESET
+3.3V
IG501
In
Out
rst
µP
IG100
SDRAM
1Mx16
IG102
IG103
dd0 - dd15
ba0 - ba11
ldqm
we
cas
ras
clk
udqm
ce
ldqml
sdwe
sdcas
sdras
memclk
dqmu
sdcs(-)
YE216
27Mhz crystal
IE216
118
pixclk
EEPROM
8Kx8
5 sda
6 scl
Sdata
Sclk
Cv_out
Y_out
C_out
R_out
G_out
B_out
md0-md15
maddr1 - 21
cs3
PCM_OUT
SCLK
LRCLK
PCM_CLK
SPDIF_OUT
we0
we1
oe
mdtw
ras0
cas0
cas1
epf_irq
md0 - md15
maddr1 - 21
we
oe
cs0
MASK ROM
1M x 16
md0 - md7
maddr1 - 16
we
oe
a0
ce
FLASH
1M x 16
IH105
md0 - md15
maddr1 - 12
oe
w
ras
cas
cas
DRAM
2Mx16
IM121
DACONVERTER
SDATA
SCLK
LRCLK
MCLK
L/OUT
R/OUT
FILTER
UY500
UY505
CINCH
SVHS Conn.
CONNECTOR To TV part
+5V
-5V
UA501
UA500
CINCH
LEFT
RIGHT
CONNECTOR
LEFT
RIGHT
OPTICAL LINK
AV Interface BOARD
Main BOARD
+8V
+3.3V
-5V
IP302
8V regulator
IP303
3.3V regulator
+12V
+5V
Switch mode power supply
AC mains 180 - 264 vac
EPF_IRQ
Power Supply BOARD

WIRING DIAGRAM - SCHEMA D'INTERCONNEXIONS - VERDRAHTUNGSPLAN - DIAGRAMMA DELLE INTERCONNESSIONI - ESQUEMA DE INTERCONEXIONES


GND
CRT BOARD
BB003
BG003
BB004
BB010
BB009
BB007
BB001
BB002
MAIN SWITCH
MAINPLUG
(180-264)V~
50/60Hz
POWER / SCAN BOARD
BP001
LP008
BP050
IP020
TP020
LP001
LP050
LP020
BP015
DP110
DP150
TP150
IP220
BP130
BP120
LL001
IP170
TL010
BL035
BL200
TL029
BP005
BL111
LL033
LL008
G2
IF001
BF001
EFC Coil
DEGAUSS
BSVM Coil
PICTURE TUBE
Vertical
Horizontal
(DVD) DVD PLAYER
KDB1
HK007
BK225
MPEG
BU702
BY217
Pick-up DVD
BS05
BY500
AV interface
BY507
BA500
S-Video
V
L
R
D/A
KDB2
HK006
HK002
MK08
HK001
BP303
BP301
POWER SUPPLY
black
red
6 pol
2 pol
PD.DVD 20000
POWER DISTRIBUTION
BP601
BP602
LP601
LP611
BP603
BP511
BP514
BP513
BP503
(+5V)
BP502
BP512
BP501
BP500
(GND)
SUBWOOFER AMPLIFIER*
PA/SW 20000 00
BA401
BA400
SUB
* Only some models
BX513
BX512
SUB I2C
FCB MODULE
BQ009
BJ004
BQ012
BJ010
BJ011
SMALL SIGNAL BOARD
BR003
BV001
IV520
BR002
BR001
IR007
IR004
BA010
IA002
BA012
BA005
BA009
IA003
BA002
BA007
BA006
IV200
BV300
IR001
IR002
IR006
IV100
IR300
IA101*
* Only some models
IU309
IU308
IC001
NH001
IA001
BX004
BX801
BX802
BX300
BX200
BX100
Teki
BX001
BA008
R
L

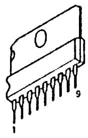
WIRING DIAGRAM - SCHÉMA D'INTERCONNEXIONS - VERDRAHTUNGSPLAN - DIAGRAMMA DELLE INTERCONNESSIONI - ESQUEMA DE INTERCONEXIONES


To TV part
HK007/BK007
BK003
BK008
KDB1
BK005
HK006
BK004
HK002
HK001
1
KDB2
(DVD) DVD PLAYER
M
BP303/HP303
BP301
Pick-up DVD
POWER SUPPLY
BK225
BD100
BS05
BU702
HP302
BW101
HP305
MPEG
AV interface
BY507
BA500
BY217
BY500
S-Video
V
L
R
D/A
To TV part

LIST OF ABBREVIATIONS - LISTE DES ABREVIATIONS - ABKÜRZUNGEN
LISTA DELLE ABBREVIAZIONI - LISTA DE ABREVIACIONES

● **ABL**	AVERAGE BEAM CURRENT LIMITING
● **AQR_ON**	DISABLE AQUISITION MODE REGUL. ENABLE PWM PULSE
● **AV1_8**	PIN_8 DETECTOR
● **AV_LINK**	AV_LINK DATAS VCR/TV
● **AV_R_ OUT**	AUDIO RIGHT-OUT
● **AV_L_ OUT**	AUDIO LEFT-OUT
● **AV_R_ IN**	AUDIO RIGHT-IN
● **AV_L_ IN**	AUDIO LEFT-IN
● **AV_B**	BLUE SIGNAL FROM AV
● **AV_G**	GREEN SIGNAL FROM AV
● **AV_R**	RED SIGNAL FROM AV
● **AV_C_ IN**	CHROMA-IN
● **AV_FB**	FAST BLANK SIGNAL FROM AV SCART
● **AV_Y_ IN**	VIDEO-IN
● **BEAM_INFO**	BEAM CURRENT INFORMATION
● **BLKCURR**	CUT OFF CURRENT
● **B_TXT**	BLUE SIGNAL OUTPUT (TEXT)
● **B_OUT**	BLUE SIGNAL TO VIDEO AMPLIFIER
● **BREATHING**	COMPENSATE BREATHING PICTURE SIGNAL
● **BSVM**	BEAM SCAN VELOCITY MODULATION
● **CNT1_20V**	SAFETY SIGNAL TO INSURE A GOOD CONNECTION BETWEEN SIGNAL BOARD AND POWER BOARD (BV001- BL111)
● **CNT2_20V**	SAFETY SIGNAL TO INSURE A GOOD CONNECTION BETWEEN SIGNAL BOARD AND POWER BOARD (BR003- BP005)
● **CRT**	CATHODE RAY TUBE
● **CVBS**	VIDEO
● **CVBS_LB_DET**	LETTERBOX VIDEO DETECTION
● **DEFL_SAFETY**	SAFETY INFORMATION FROM DEFLECTION
● **DEGAUSS**	DEGAUSS SIGNAL
● **DPC**	DYNAMIC PHASE COMPENSATION SIGNAL
● **EFC**	EARTH FIELD CORRECTION
● **EHT**	EXTREMELY HIGH TENSION
● **E.W_DRIVE**	EAST - WEST DRIVE SIGNAL
● **EW_PROT**	SAFETY SIGNAL FROM DIODE MODULATOR
● **FB DETEC**	FAST BLANKING DETECT
● **FB_TXT**	FAST BLANKING (TEXT)
● **FW ADJ.**	FULL WHITE ADJUSTMENT
● **G_OUT**	GREEN SIGNAL TO VIDEO AMPLIFIER
● **G_TXT**	GREEN SIGNAL OUTPUT (TEXT)
● **H_DRIVE**	DRIVE SIGNAL FOR HORIZONTAL DEFLECTION
● **HEATER**	HEATER OUTPUT FROM THE DST TO CRT
● **H DEFL. PROT.**	HORIZONTAL DEFLECTION PROTECTION
● **IIC-CL-1**	I2C CLOCK BUS 1
● **IIC-CL-2**	I2C CLOCK BUS 2
● **INF_POW_FAIL**	POWER FAIL INFORMATION
● **IR**	INFRARED RECEIVER
● **LDR**	LED DISPLAY
● **MUTE**	MUTES AUDIO AMPLFIERS
● **NMI**	NON MASKABLE INTERRUPT
● **PAN_SWITCH**	SIGNAL FOR PANORAMA CIRCUIT
● **PHI2_REF**	PHI2 REFERENCE SIGNAL
● **PIF**	PICTURE IF SIGNAL
● **PKS**	PEAK SENSING
● **PO**	POWER ON
● **PWM**	PULSE WIDTH MODULATION
● **RES_MSP**	MSP RESET
● **RESET**	RESET TO MICROPROCESSOR
● **ROTATION**	OUTPUT OF EARTH FIELD CORRECTION STAGE
● **R_OUT**	RED SIGNAL TO VIDEO AMPLIFIER
● **R_TXT**	RED SIGNAL OUTPUT (TEXT)
● **PIF**	PICTURE IF SIGNAL
● **SIF**	SOUND IF SIGNAL
● **SSC**	SUPER SAND CASTLE
● **SSC_V_GUARD**	SAFETY DATA GENERATED BY THE VERTICAL AMPLIFIER TDA8177F
● **TRAP_INFO**	BG/L,L',D/K K' I SWITCH
● **+USYS**	SYSTEM VOLTAGE
● **+/- UA**	SOUND VOLTAGE
● **+UVERT**	POSITIVE SUPPLY VERTICAL VOLTAGE
● **-UVERT**	NEGATIVE SUPPLY VERTICAL VOLTAGE
● **+UVFB**	POSITIVE SUPPLY VOLTAGE FOR VERTICAL POWER STAGE
● **+UVIDEO**	VIDEO VOLTAGE FOR THE CRT BOARD
● **U_IN**	U FROM CHROMA DECODER
● **V_IN**	V FROM CHROMA DECODER
● **V_DRIVE**	VERTICAL DEFLECTION DRIVE SIGNAL
● **Y_IN**	Y FROM CHROMA DECODER
● **5 V**	5V POWER SUPPLY SIGNAL BOARD
● **6 V**	6V POWER SUPPLY
● **5V_UP**	MICROPROCESSOR SUPPLY VOLTAGE
● **10 V**	10V POWER SUPPLY
● **8 V**	8V SUPPLY SIGNAL BOARD
● **8V_STBY**	8V STANDBY
● **40V**	SUPPLY VOLTAGE TUNER
● **20V**	SUPPLY VOLTAGE HORIZONTAL DRIVER AND BSVM CRT

INTEGRATED CIRCUITS AND TRANSISTORS OUTLINE - CIRCUITS INTEGRES ET TRANSISTORS
INTEGRIERTE SCHALTUNGEN UND TRANSISTOREN - CIRCUITI INTEGRATI TRANSISTOR
CIRCUITOS INTEGRADOS Y TRANSISTORES



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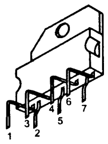
TEA5101B



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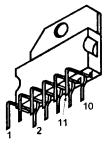
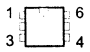


TDA7269



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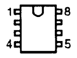

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MC7805CT
MC7812CT
MC33076/P1
ST24C04-B1
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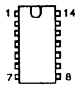
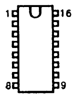
X24164



TL084C



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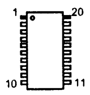

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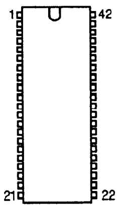

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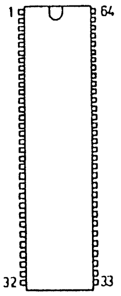

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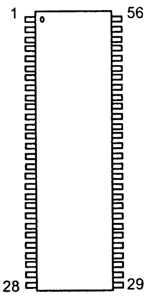
MPS3410



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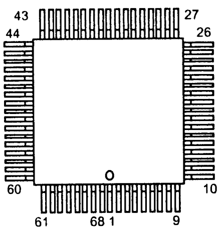
STV2162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27
44
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60
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61
68 1
9

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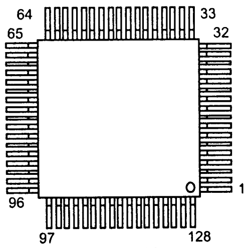
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97
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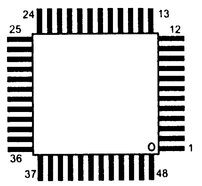
IC-QP128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25
12
36
1
37
48

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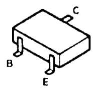
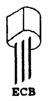
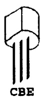


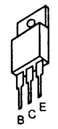
BCR141- BC846B
BC 847B-BC856B
BC857B-BF 799
BC 848 A/B/C



BC368
BC639
BF421
BF 422
BF423



BC327
BC 337
BC547B
BC557B
BC 548B
BC 558B



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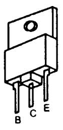
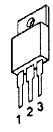
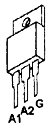
2SC3675
BD 241
TIP122



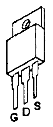
BUL810TH
BUV48CFITH16
BW93CFI
BW94CFI
ON4977



7805
7812
L7912CV



BT806 -600C



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STP22NE03L
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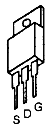
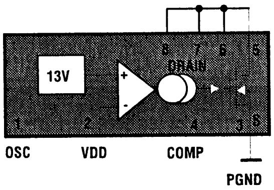


TR03-400T

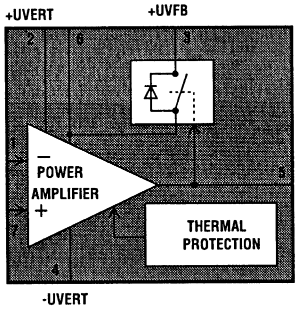
INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER SCHEMA A BLOCCHI DEL CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE -NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

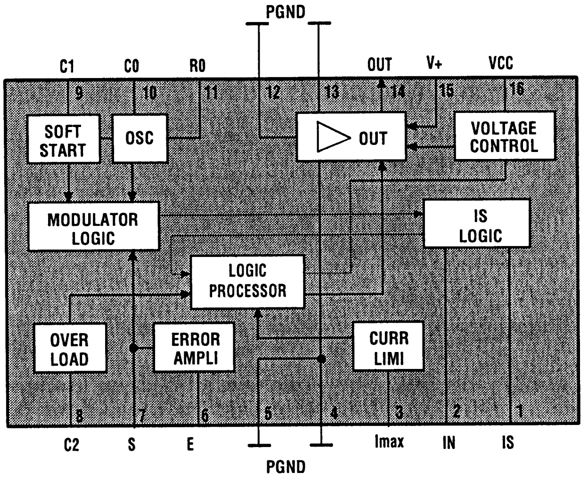
IP020 - VIPER20DIP


8
7
6
5
DRAIN
13V
+
-
1
2
4
3
5
OSC
VDD
COMP
PGND

IF001 - TDA8177F


+UVERT
+UVFB
2
6
3
1
POWER
AMPLIFIER
+
7
5
THERMAL
PROTECTION
4
-UVERT

IP050 - TEA2262


PGND
C1
C0
R0
OUT
V+
VCC
9
10
11
12
13
14
15
16
SOFT
START
OSC
OUT
VOLTAGE
CONTROL
MODULATOR
LOGIC
IS
LOGIC
LOGIC
PROCESSOR
OVER
LOAD
ERROR
AMPLI
CURR
LIMI
8
7
6
5
4
3
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C2
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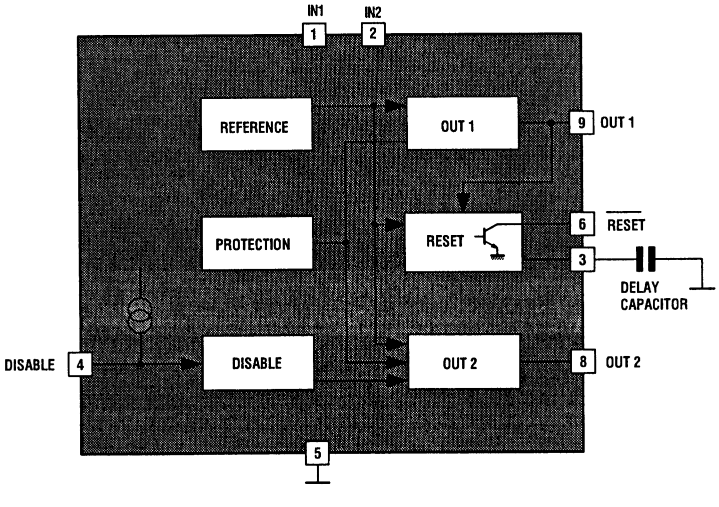
Imax
IN
IS
PGND

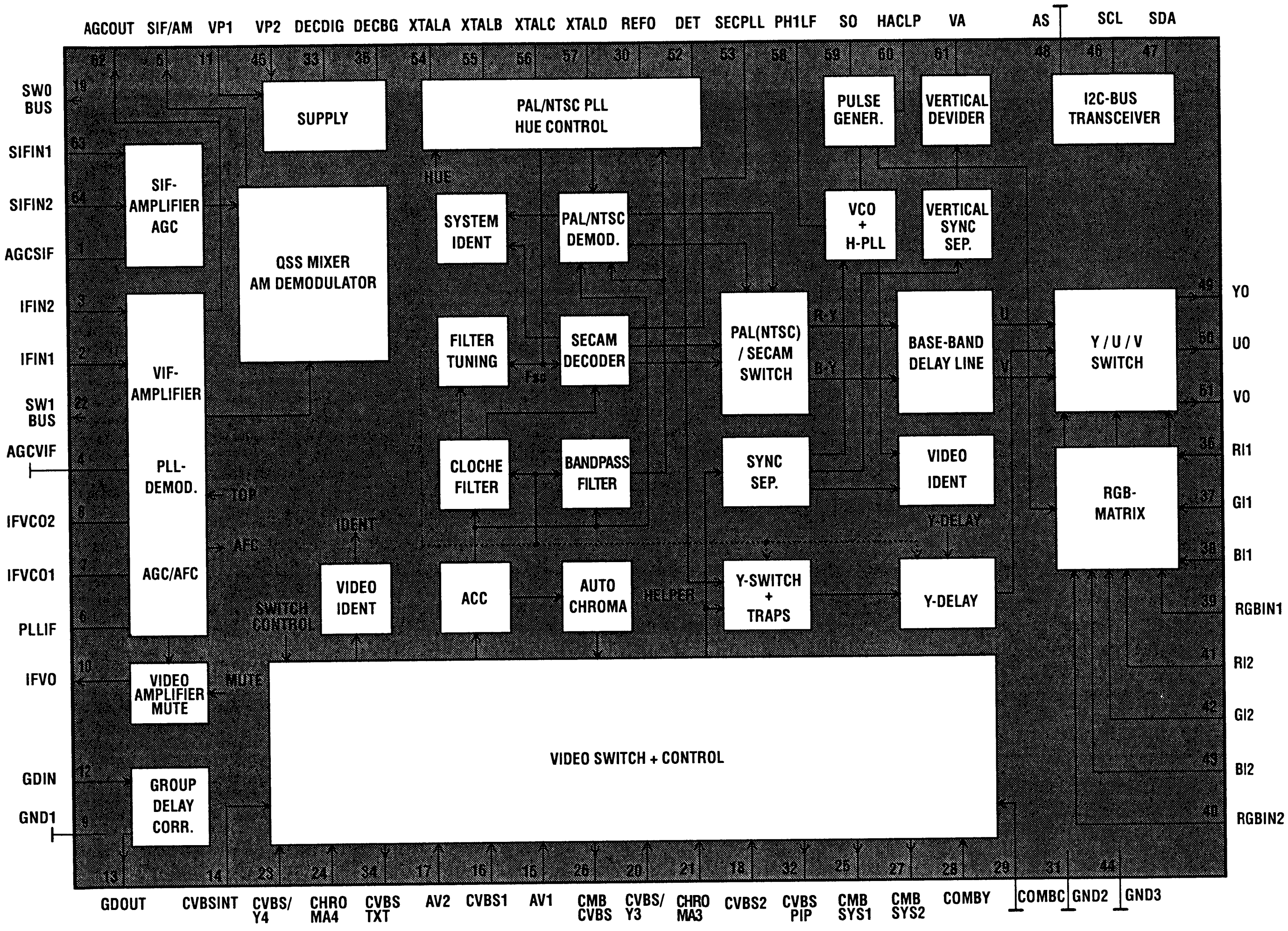
IP220 - TDA8139


IN1
1
IN2
2
REFERENCE
OUT 1
9
OUT 1
PROTECTION
RESET
6
RESET
3
DELAY
CAPACITOR
DISABLE
4
DISABLE
OUT 2
8
OUT 2
5

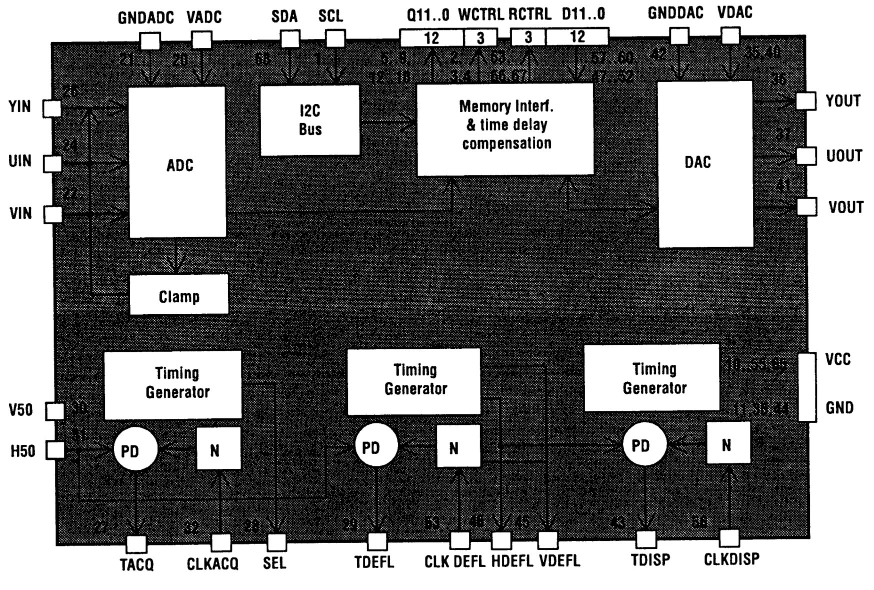
INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER
SCHEMA A BLOCCHI DEL CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

IC001 - TDA9321H


AGCOUT
SIF/AM
VP1
VP2
DECDIG
DECBG
XTALA
XTALB
XTALC
XTALD
REFO
DET
SECPLL
PH1LF
SO
HACLP
VA
AS
SCL
SDA
SW0 BUS
SIFIN1
SIFIN2
AGCSIF
IFIN2
IFIN1
SW1 BUS
AGCVIF
IFVCO2
IFVCO1
PLLIF
IFVO
GDIN
GND1
SUPPLY
PAL/NTSC PLL HUE CONTROL
PULSE GENER.
VERTICAL DEVIDER
I2C-BUS TRANSCEIVER
SIF-AMPLIFIER AGC
QSS MIXER AM DEMODULATOR
HUE
SYSTEM IDENT
PAL/NTSC DEMOD.
VCO + H-PLL
VERTICAL SYNC SEP.
VIF-AMPLIFIER
PLL-DEMOD.
AGC/AFC
TOP
AFC
FILTER TUNING
SECAM DECODER
Fsc
PAL(NTSC) / SECAM SWITCH
R-Y
B-Y
BASE-BAND DELAY LINE
U
V
Y / U / V SWITCH
Y0
U0
V0
RI1
GI1
BI1
RGBIN1
RI2
GI2
BI2
RGBIN2
CLOCHE FILTER
BANDPASS FILTER
SYNC SEP.
VIDEO IDENT
RGB-MATRIX
IDENT
Y-DELAY
VIDEO IDENT
ACC
AUTO CHROMA
HELPER
Y-SWITCH + TRAPS
Y-DELAY
SWITCH CONTROL
VIDEO AMPLIFIER MUTE
MUTE
GROUP DELAY CORR.
VIDEO SWITCH + CONTROL
GDOUT
CVBSINT
CVBS/ Y4
CHRO MA4
CVBS TXT
AV2
CVBS1
AV1
CMB CVBS
CVBS/ Y3
CHRO MA3
CVBS2
CVBS PIP
CMB SYS1
CMB SYS2
COMBY
COMBC
GND2
GND3

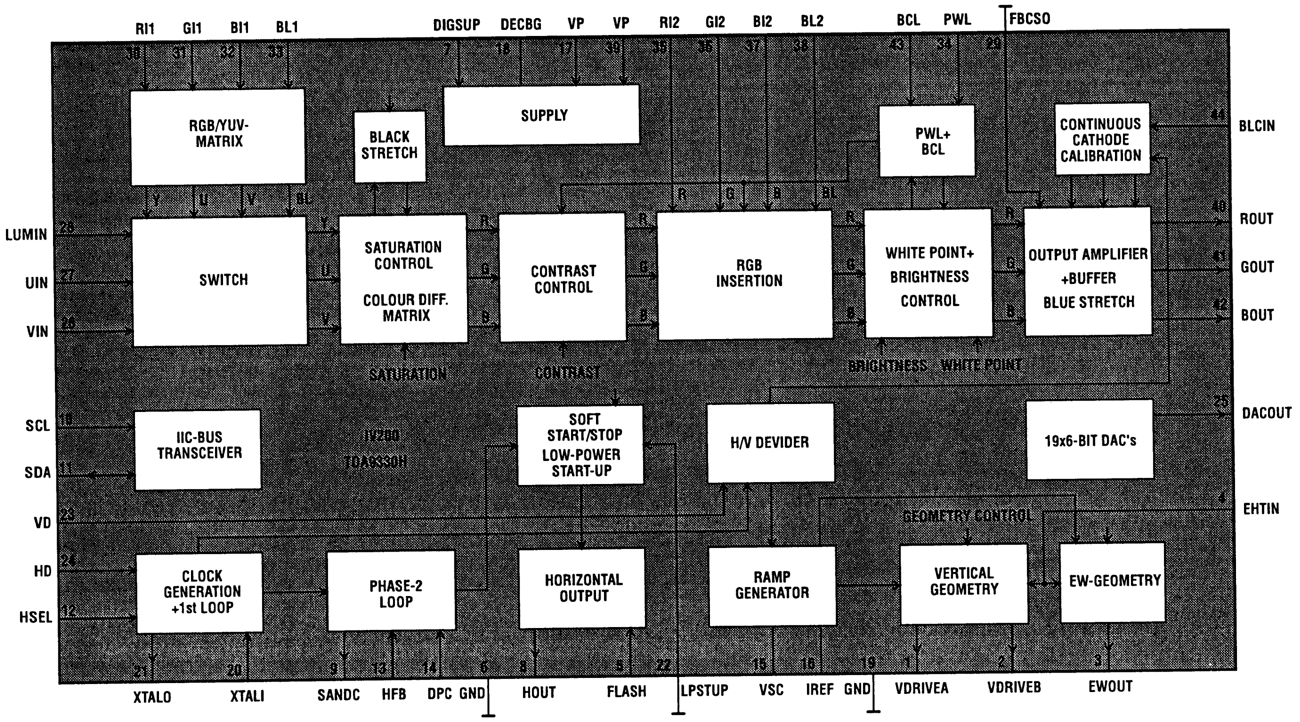
IU308 - DMU0


GNDADC
VADC
SDA
SCL
Q11..0
WCTRL
RCTRL
D11..0
GNDDAC
VDAC
12
3
3
12
YIN
UIN
VIN
ADC
I2C Bus
Memory Interf. & time delay compensation
DAC
YOUT
UOUT
VOUT
Clamp
Timing Generator
Timing Generator
Timing Generator
VCC
GND
V50
H50
PD
N
PD
N
PD
N
TACQ
CLKACQ
SEL
TDEFL
CLK DEFL
HDEFL
VDEFL
TDISP
CLKDISP

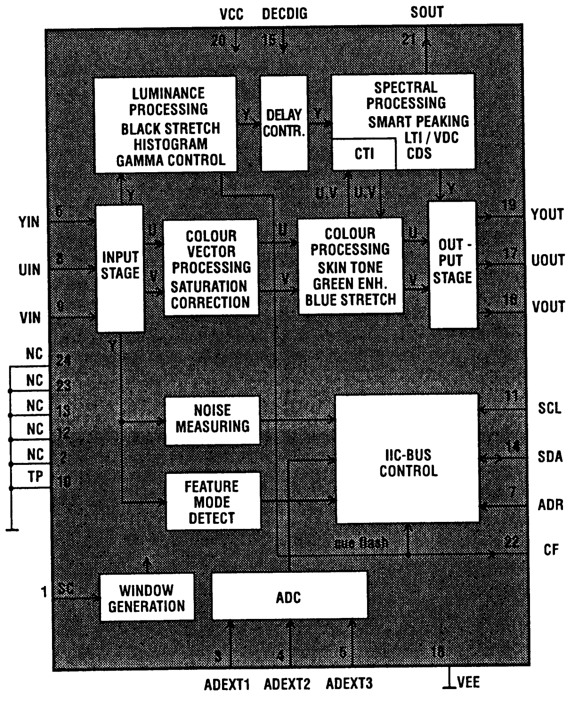
INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER SCHEMA A BLOCCHI DEL CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

IV200 - TDA9330H


RI1
GI1
BI1
BL1
DIGSUP
DECBG
VP
VP
RI2
GI2
BI2
BL2
BCL
PWL
FBCSO
30
31
32
33
7
18
17
39
35
36
37
38
43
34
29
RGB/YUV-MATRIX
BLACK STRETCH
SUPPLY
PWL+ BCL
CONTINUOUS CATHODE CALIBRATION
BLCIN
44
Y
U
V
BL
R
G
B
BL
LUMIN
28
UIN
27
VIN
26
SWITCH
SATURATION CONTROL
COLOUR DIFF. MATRIX
CONTRAST CONTROL
RGB INSERTION
WHITE POINT+ BRIGHTNESS CONTROL
OUTPUT AMPLIFIER +BUFFER BLUE STRETCH
ROUT
40
GOUT
41
BOUT
42
SATURATION
CONTRAST
BRIGHTNESS
WHITE POINT
SCL
10
SDA
11
IIC-BUS TRANSCEIVER
IV200
TDA9330H
SOFT START/STOP LOW-POWER START-UP
H/V DEVIDER
19x6-BIT DAC's
DACOUT
25
VD
23
EHTIN
4
GEOMETRY CONTROL
HD
24
HSEL
12
CLOCK GENERATION +1st LOOP
PHASE-2 LOOP
HORIZONTAL OUTPUT
RAMP GENERATOR
VERTICAL GEOMETRY
EW-GEOMETRY
21
20
9
13
14
6
8
5
22
15
16
19
1
2
3
XTALO
XTALI
SANDC
HFB
DPC
GND
HOUT
FLASH
LPSTUP
VSC
IREF
GND
VDRIVEA
VDRIVEB
EWOUT

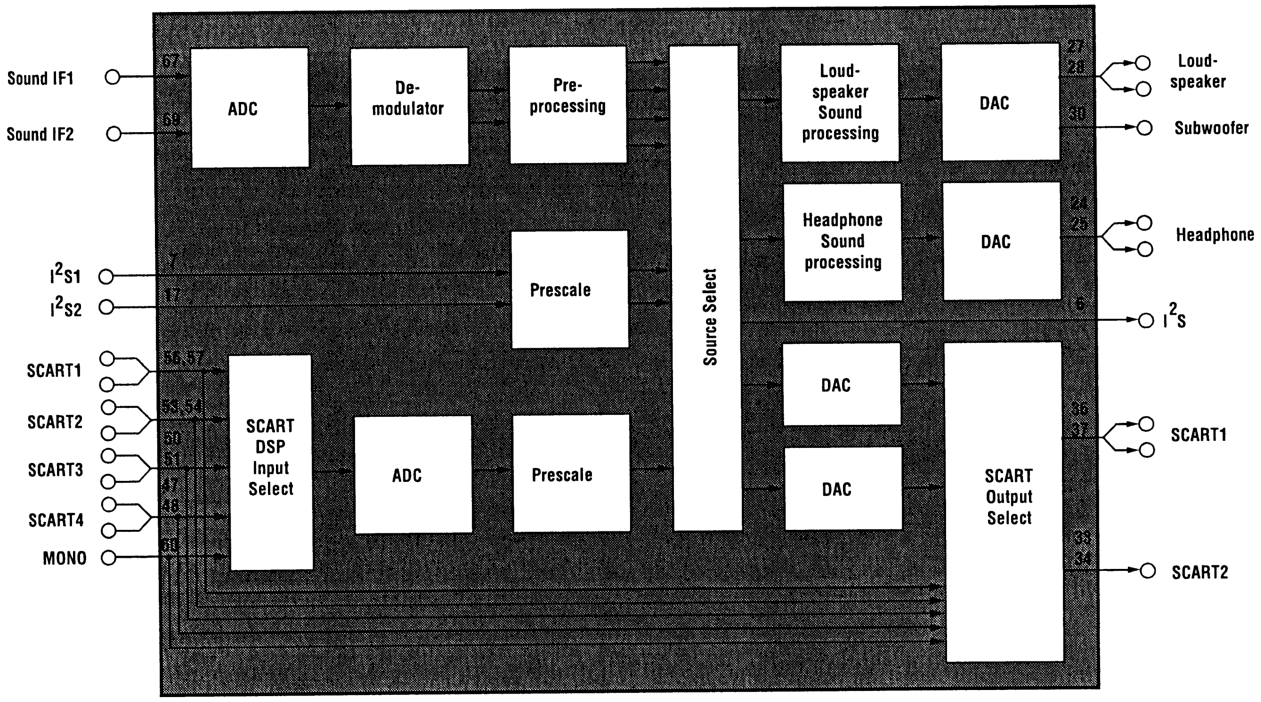
IV100 - TDA9178


VCC
DECDIG
SOUT
20
15
21
LUMINANCE PROCESSING BLACK STRETCH HISTOGRAM GAMMA CONTROL
Y
DELAY CONTR.
Y
SPECTRAL PROCESSING SMART PEAKING LTI / VDC CDS
CTI
U,V
U,V
Y
YIN
6
UIN
8
VIN
9
INPUT STAGE
U
V
COLOUR VECTOR PROCESSING SATURATION CORRECTION
U
V
COLOUR PROCESSING SKIN TONE GREEN ENH. BLUE STRETCH
U
V
OUT - PUT STAGE
YOUT
19
UOUT
17
VOUT
16
Y
NC
24
NC
23
NC
13
NC
12
NC
2
TP
10
NOISE MEASURING
FEATURE MODE DETECT
IIC-BUS CONTROL
SCL
11
SDA
14
ADR
7
CF
22
1
SC
WINDOW GENERATION
ADC
3
4
5
18
ADEXT1
ADEXT2
ADEXT3
VEE

INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER SCHEMA A BLOCCHI DEL CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

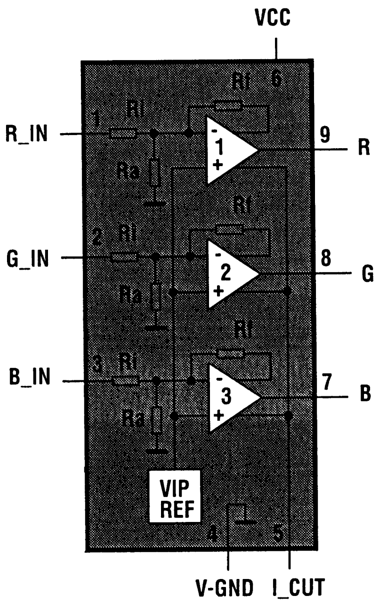
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

IA001 - MSP 34X0G


Sound IF1
Sound IF2
67
69
ADC
De-modulator
Pre-processing
Source Select
Loud-speaker Sound processing
DAC
27
28
Loud-speaker
30
Subwoofer
Headphone Sound processing
DAC
24
25
Headphone
I^2S1
I^2S2
7
17
Prescale
6
I^2S
SCART1
SCART2
SCART3
SCART4
MONO
56,57
53,54
50
51
47
48
60
SCART DSP Input Select
ADC
Prescale
DAC
DAC
SCART Output Select
36
37
SCART1
35
34
SCART2

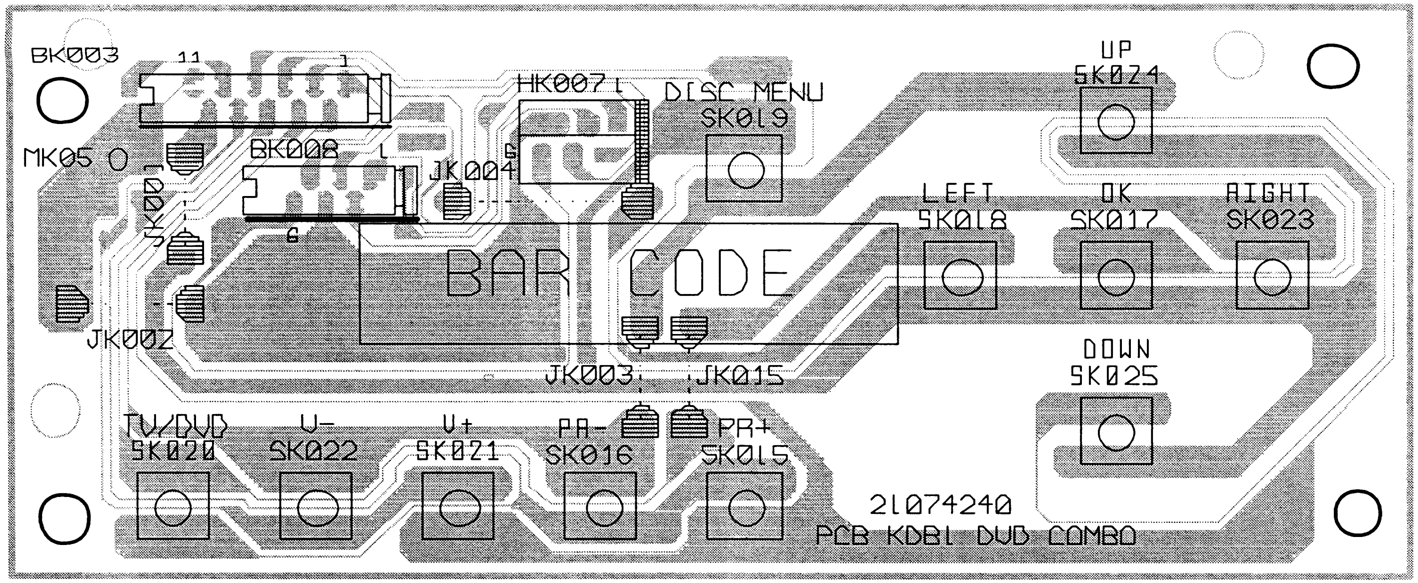
VIDEO PART - PARTIE VIDEO - VIDEO-SIGNALVERARBEITUNG - ELABORAZIONE VIDEO - TRATAMENTO VIDEO

IB001 - TDA6108JF

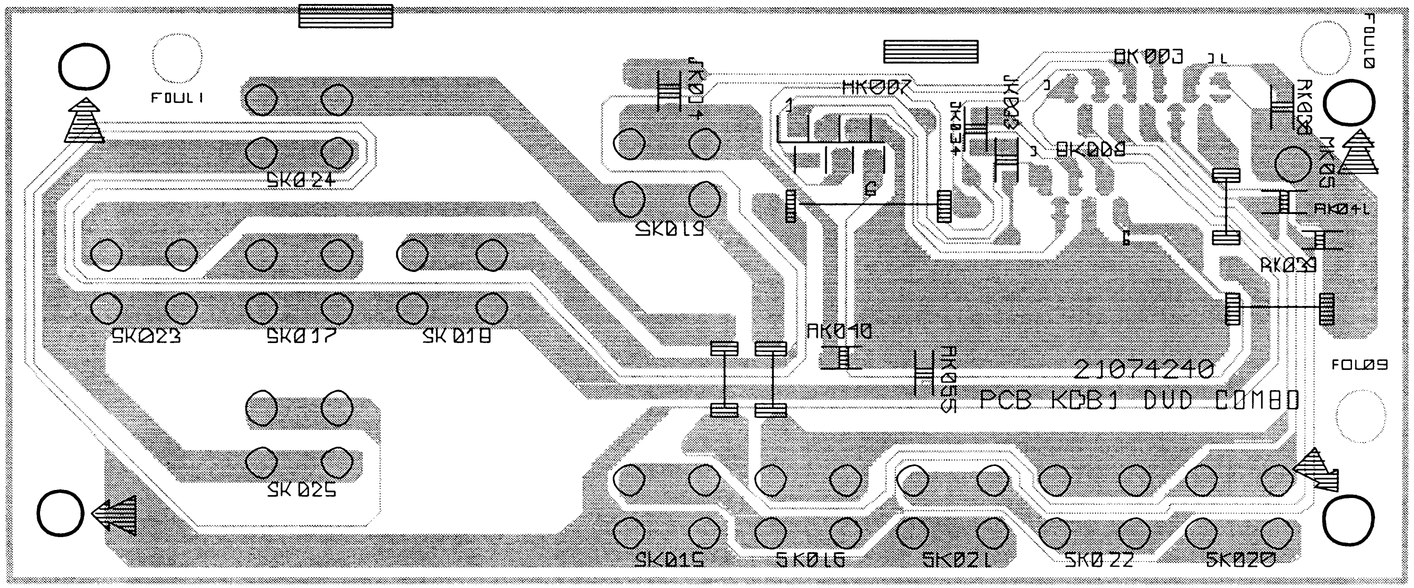

VCC
6
Rf
R_IN
1
Ri
Ra
1
9
R
Rf
G_IN
2
Ri
Ra
2
8
G
Rf
B_IN
3
Ri
Ra
3
7
B
VIP REF
4
5
V-GND
I_CUT

KEYBOARD CIRCUIT BOARDS - CIRCUITS IMPRIMES PLATINES COMMANDES - LEITERPLATTE BEDIENTEIL - PIASTRE TASTIERA - PLATINAS MANDOS

COMPONENT SIDE - COTÉ COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES

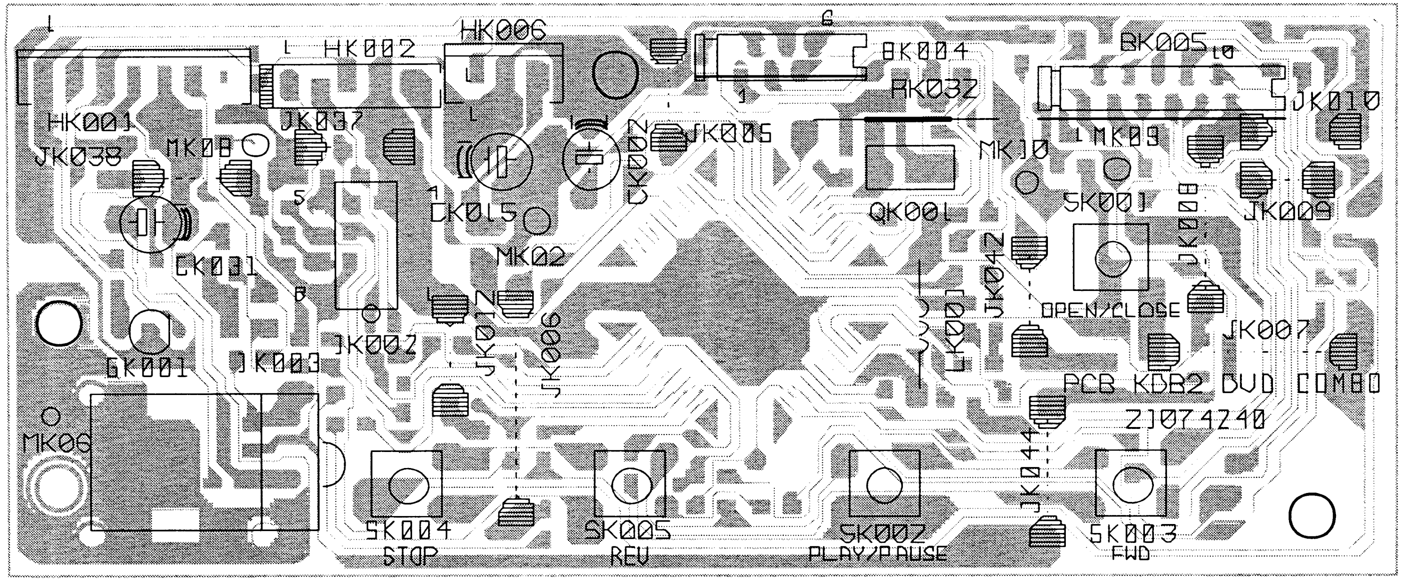

BK003
11
1
HK007 L
DISC MENU
SK019
UP
SK024
MK05
JK001
BK008
L
JK004
G
G
LEFT
SK018
OK
SK017
RIGHT
SK023
BAR CODE
JK002
JK003
JK015
DOWN
SK025
TV/DVD
SK020
V-
SK022
V+
SK021
PR-
SK016
PR+
SK015
21074240
PCB KDB1 DVD COMBO

SOLDER SIDE - COTÉ CUIVRE - LÖTSEITE - LATO SALDATURE - LADO DEL COBRE

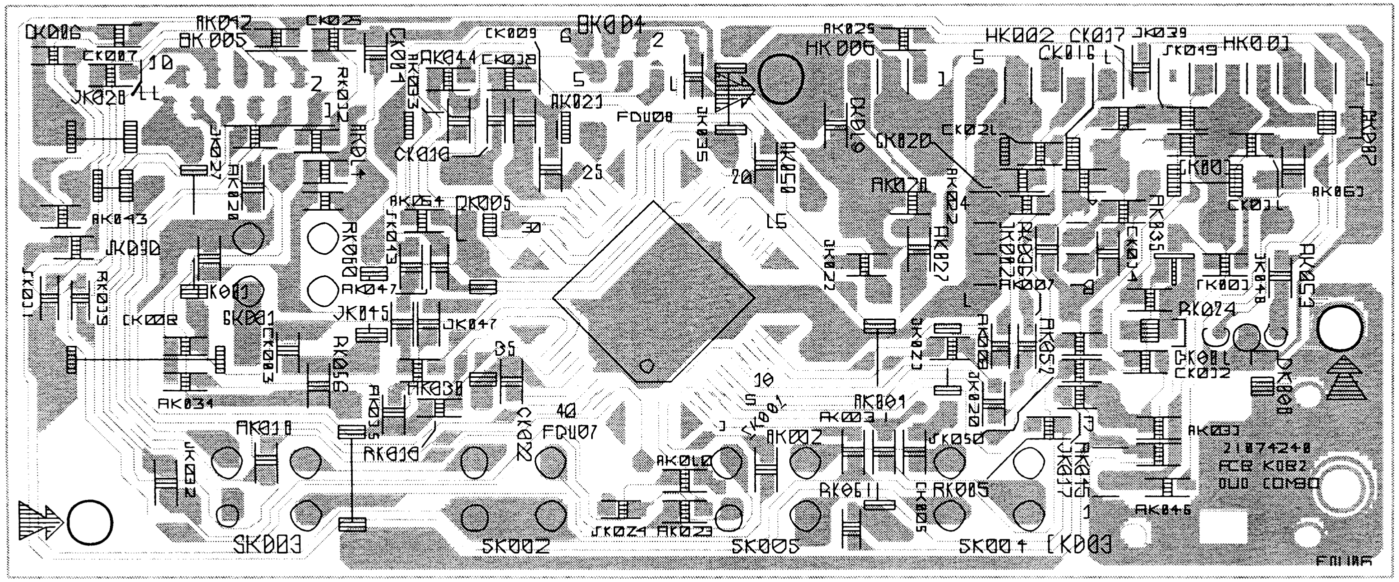

FOUL1
FOUL0
SK024
JK001+
SK019
HK007
1
G
JK034
BK003
BK008
AK038
MK05
AK041
AK039
AK040
AK055
G
21074240
PCB KDB1 DVD COMBO
FOL09
SK023
SK017
SK018
SK025
SK015
SK016
SK021
SK022
SK020

KEYBOARD CIRCUIT BOARDS - CIRCUITS IMPRIMES PLATINES COMMANDES - LEITERPLATTE BEDIENTEIL - PIASTRE TASTIERA - PLATINAS MANDOS

COMPONENT SIDE - COTÉ COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES

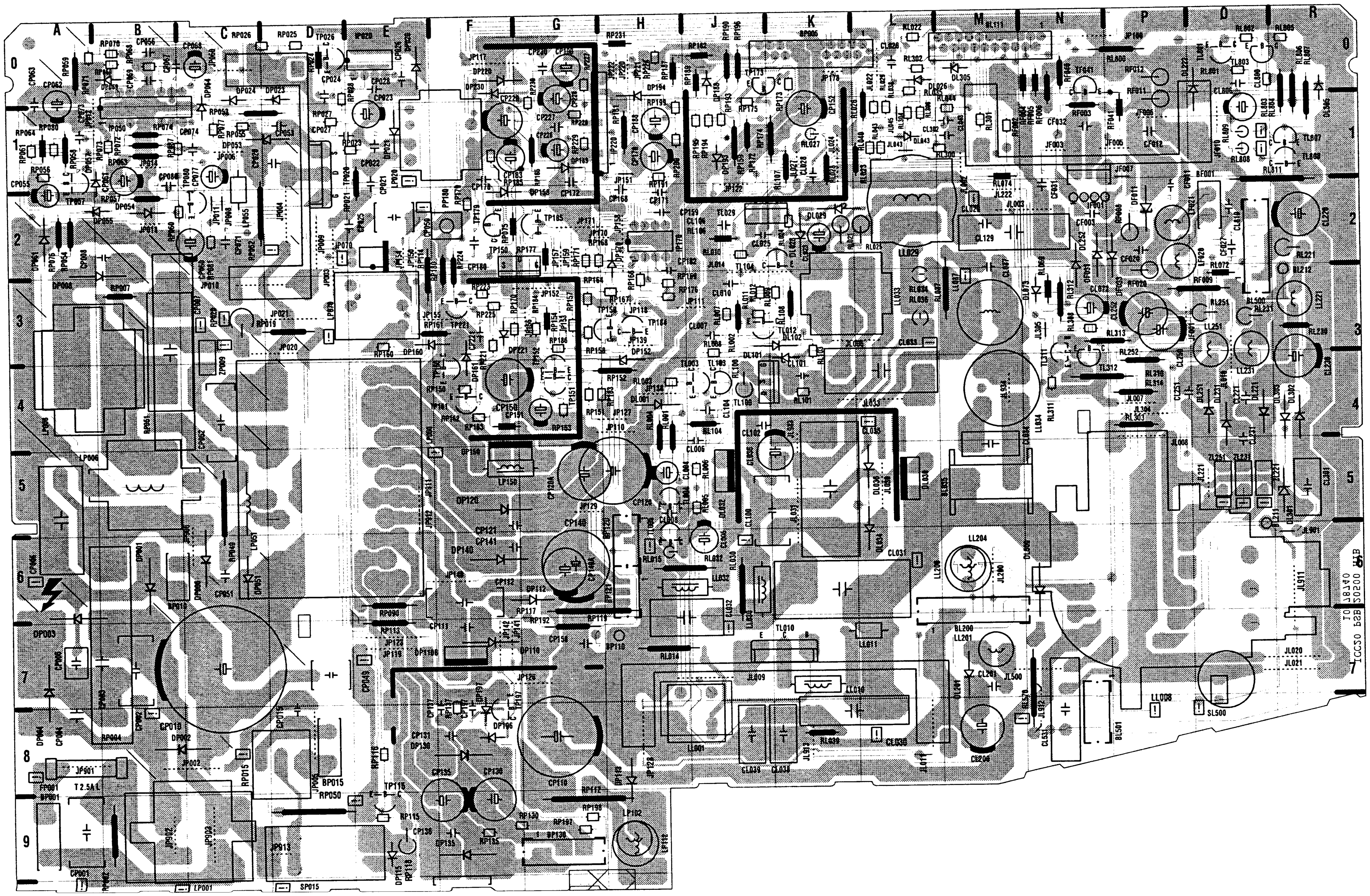

HK001
HK002
HK006
BK004
BK005
RK032
JK010
JK038
MK08
JK037
CK002
JK005
MK10
MK09
CK015
CK031
MK02
QK001
SK001
JK008
JK009
JK042
LK001
OPEN/CLOSE
JK007
GK001
JK003
JK002
JK011
JK006
PCB KDB2 DVD COMBO
ZJ074240
MK06
JK044
SK004
STOP
SK005
REV
SK002
PLAY/PAUSE
SK003
FWD

SOLDER SIDE - COTÉ CUIVRE - LÖTSEITE - LATO SALDATURE - LADO DEL COBRE


DK006
AK012
BK005
CK025
CK004
CK009
BK004
AK025
HK002
CK017
JK039
HK001
CK007
AK044
CK018
HK006
CK016
JK049
JK028
AK021
FDU08
JK035
DK019
CK020
CK021
CK010
AK050
AK026
CK011
AK061
AK087
AK064
DK005
AK043
JK030
RK060
AK047
JK043
AK027
JK022
AK007
AK035
JK048
AK053
AK039
CK008
GK001
JK045
JK047
JK021
AK008
AK052
RK024
CK001
CK012
DK008
AK034
CK003
AK056
MK030
AK001
AK003
JK020
AK018
AK010
CK022
FDU07
AK002
JK050
AK031
JK032
AK060
AK061
AK005
JK017
AK046
ZJ074240
PCB KDB2
DVD COMBO
JK024
AK023
SK003
SK002
SK005
SK004
CK003
FDU06

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES


A
B
C
D
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J
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Q
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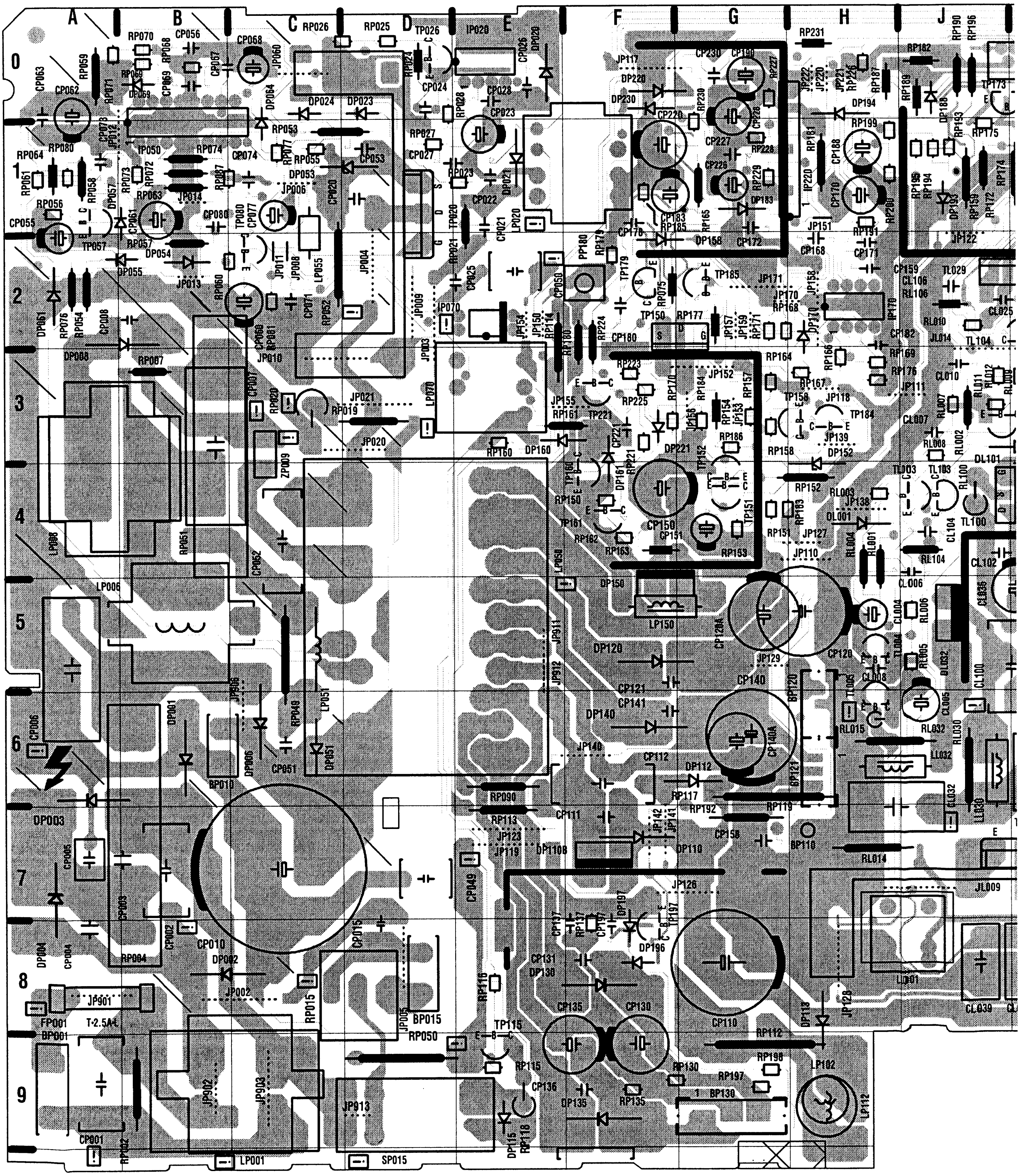
9

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PI

COMPONENT•SIDE•-•COTE•COMPOSANTS•-•BESTÜCKUNGSSEITE•-•LATO•COMPONENTI•-•LADO•COMPONENTES


A
B
C
D
E
F
G
H
J
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2
3
4
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6
7
8
9
RP070
CP056
CP068
RP026
RP025
TP026
IP020
JP117
CP230
CP190
RP231
RP182
RP190
RP196
CP063
RP059
CP062
RP080
RP064
RP061
RP058
CP055
TP057
DP061
RP076
RP054
CP008
DP008
RP007
LP008
LP006
CP006
DP003
CP005
DP004
CP004
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FP001
T-2.5A
BP001
CP001
RP002
LP001
SP015
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JP903
JP913
RP004
CP010
DP002
JP002
RP015
BP015
RP050
JP005
CP015
DP001
CP003
CP002
BP010
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RP048
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DP051
CP052
RP051
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LP055
JP004
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CP071
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JP070
JP010
CP060
RP081
RP060
JP013
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RP057
CP061
DP057
RP053
DP053
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DP023
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RP055
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RP074
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RP073
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CP027
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RP021
CP021
CP022
CP025
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CP026
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CP221
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RP153
TP152
TP151
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LP150
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CP141
DP140
CP140
CP140A
BP120
JP140
CP112
DP112
RP117
RP192
CP111
RP090
RP113
JP123
JP119
DP110B
JP142
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DP110
CP158
BP110
RP119
JP126
DP197
TR197
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CP227
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RP185
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RP176
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RL011
RL009
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TL003
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RL100
RL003
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RL004
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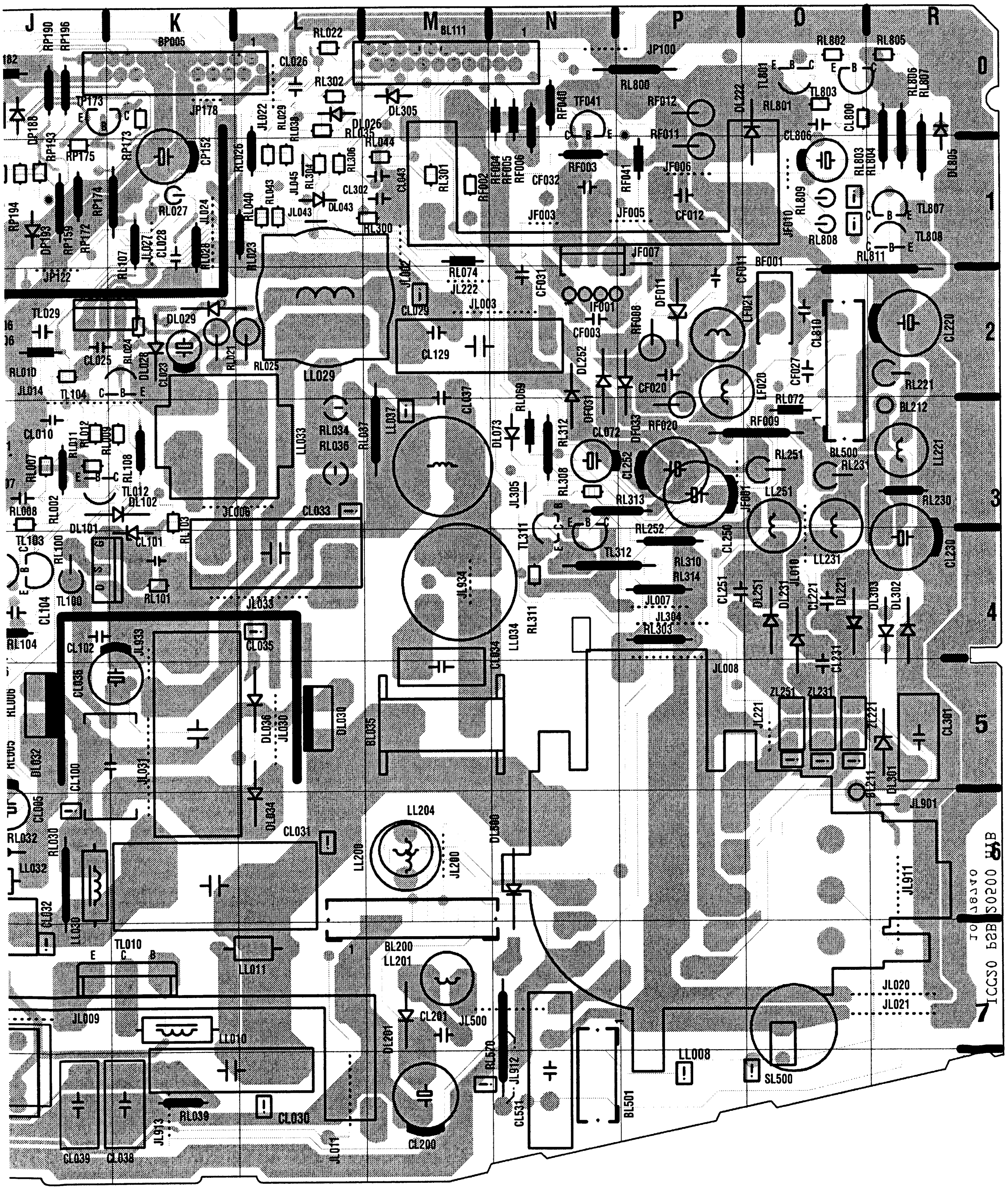
S


J
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RL806
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DL805
RL809
RL808
TL807
TL808
RL811
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BF001
CF011
LF021
CL810
CL220
RL221
BL212
LL221
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CL230
RL231
BL500
LL251
LL231
RL251
RL072
RF009
LF020
CF027
DL222
RF012
RF011
JF006
CF012
JF005
JF003
CF032
RF003
RF041
TF041
RF040
RF002
RF004
RF005
RF006
RL301
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JF007
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DF011
RF008
CF003
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RL034
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CL129
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DL026
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CL302
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CP152
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RL027
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RP190
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CL031
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RL030
LL032
CL032
LL030
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E
C
B
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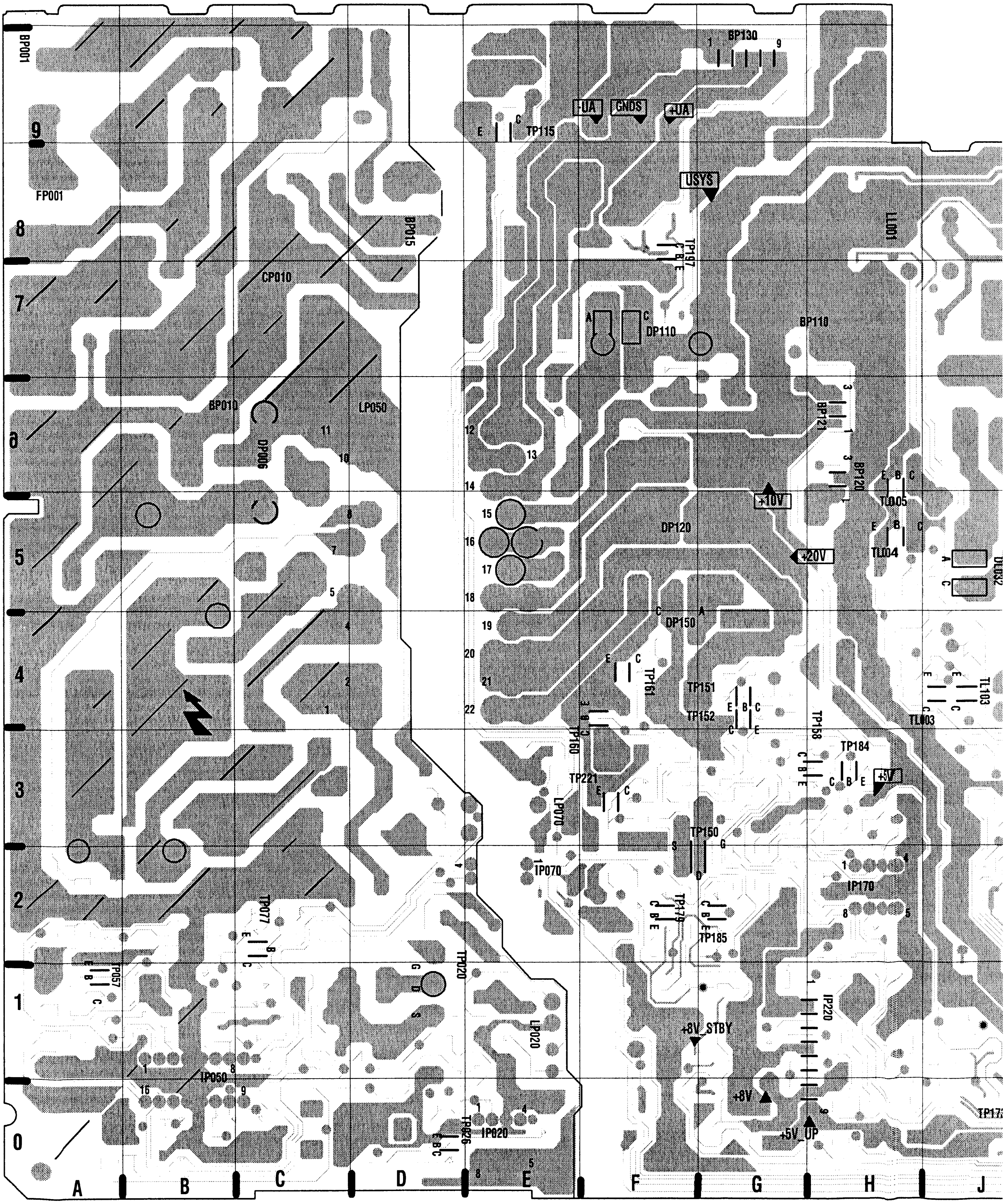
JL009
LL010
RL039
JL913
CL030
CL039
CL038

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE

SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS



BP001
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FP001
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A
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F
G
H
J
BP130
1
9
-UA
GNDS
+UA
E
C
TP115
USYS
TP197
C B E
LL001
BP015
CP010
A
C
DP110
BP110
BP010
DP006
LP050
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TL005
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TL004
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DP120
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C
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C A
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TP152
E B C
C E
TP158
TL103
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TP184
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C B E
+5V
TP150
S G D
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E B C
TP179
C B E
C B E
TP185
TP057
E B C
TP020
G D S
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+8V_STBY
IP050
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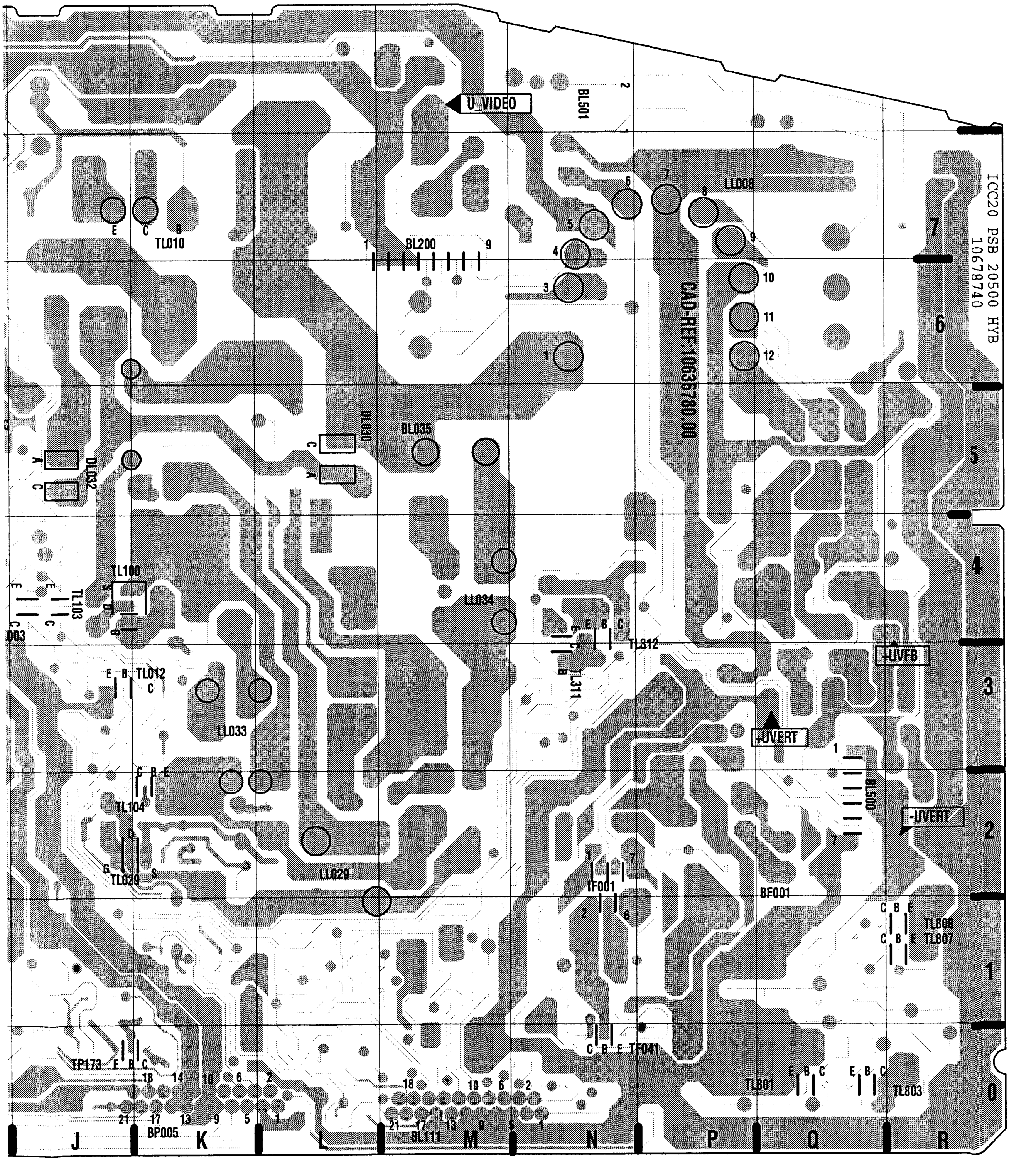
15
9
+8V
TP026
E B C
1
4
IP020
8
5
+5V_UP
TP172

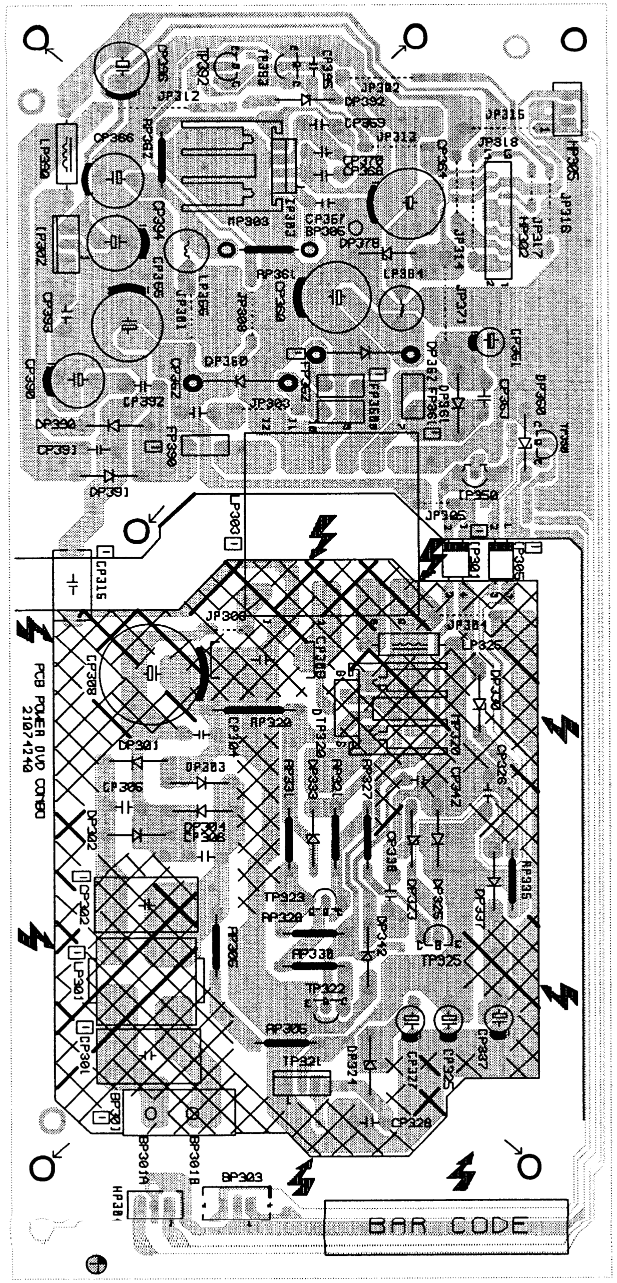
ICC20
First•issue•05•/•00

LATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS


U_VIDEO
BL501
ICC20 PSB 20500 HYB
10678740
LL008
BL200
TL010
E
C
B
CAD-REF:10635780.00
DL030
BL035
DL032
A
C
TL100
TL103
003
TL012
LL033
LL034
TL312
TL311
+UVFB
+UVERT
-UVERT
BL500
TL104
TL029
LL029
TF001
BF001
TL808
TL807
TF041
TL801
TL803
TP173
BP005
BL111
J
K
L
M
N
P
Q
R
0
1
2
3
4
5
6
7

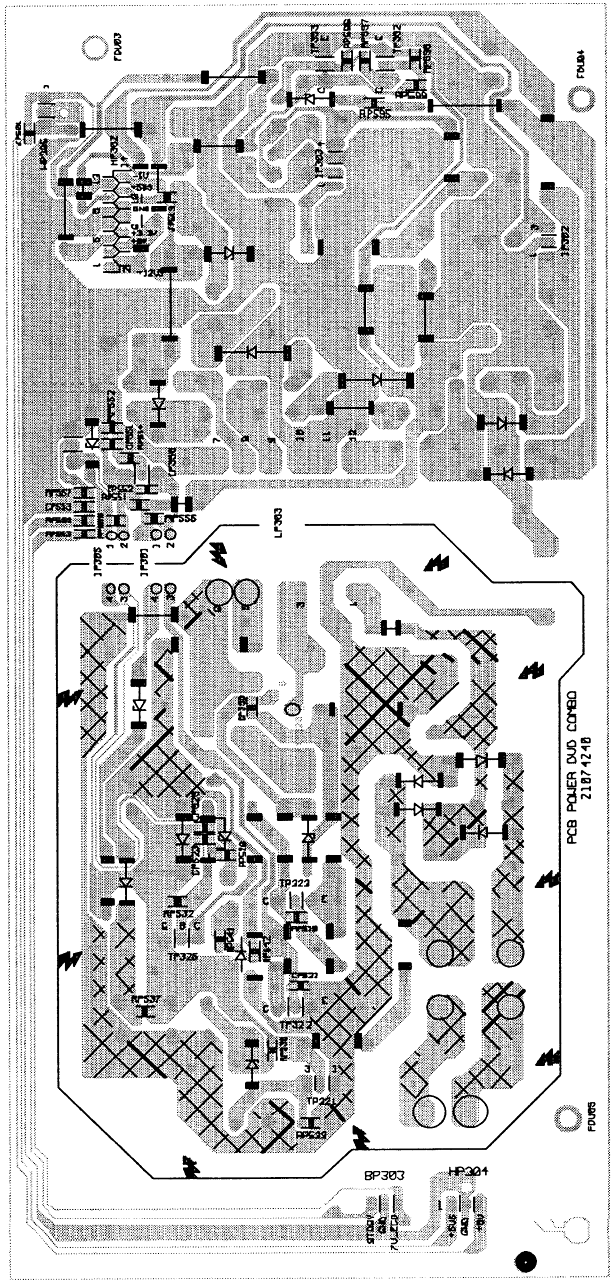
POWER SUPPLY CIRCUIT BOARD - CIRCUIT IMPRIME DE L'ALIMENTATION - LEITERPLATTE NETZTEIL - PIASTRA DEI CIRCUITI DI ALIMENTAZIONE - PLATINA ALIMENTACIÓN

COMPONENT SIDE - COTÉ COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES



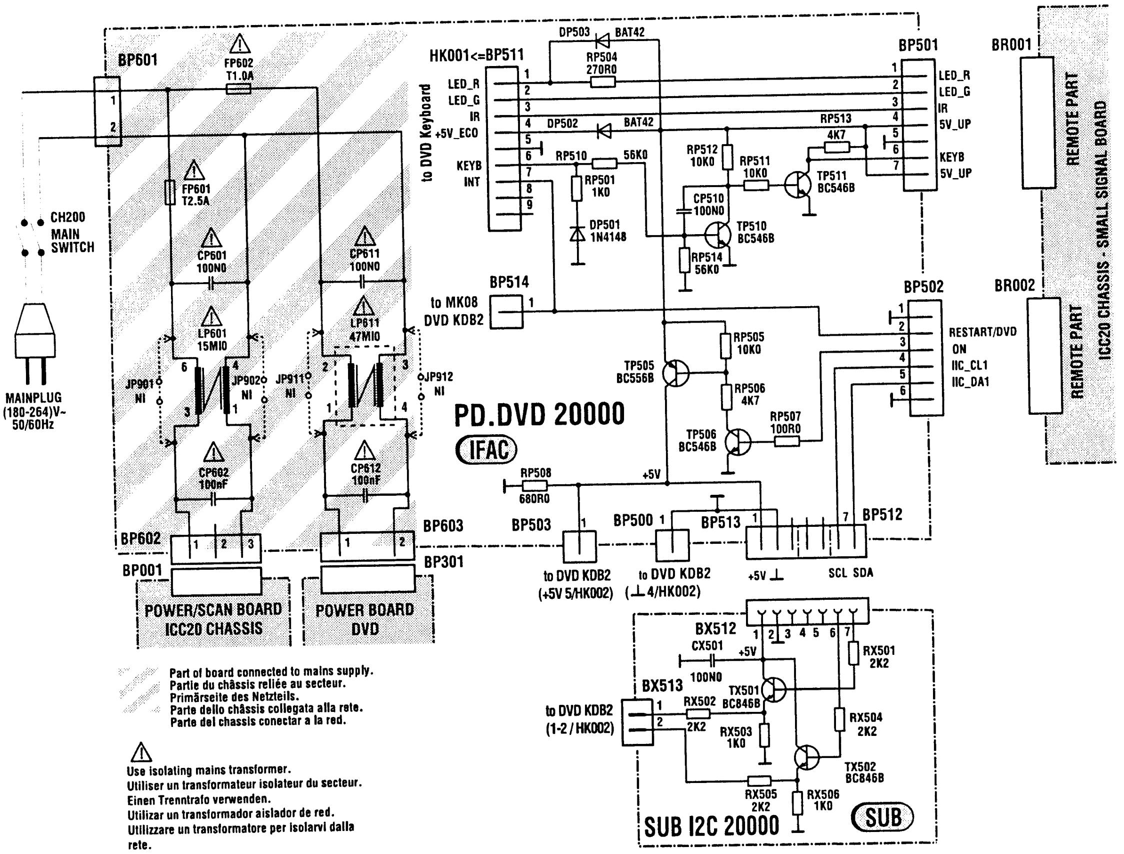
PCB POWER DVD COMBO
21074240
JP312
DP392
JP302
CP369
JP313
CP364
JP315
JP318
HP305
JP316
CP366
CP304
CP365
MP303
CP367
BP306
DP370
JP317
HP302
LP304
JP314
CP353
CP360
JP371
DP360
CP362
FP360
DP362
CP392
JP303
CP390
DP390
FP390
CP391
DP391
CP361
CP363
DP361
DP350
TP350
LP303
JP305
CP316
CP305
TP301
JP306
JP304
LP325
CP308
CP318
RP320
DP301
DP303
CP306
DP304
CP303
DP302
DP330
RP326
TP320
DP320
RP327
CP342
DP323
CP302
TP323
RP328
RP330
TP325
DP325
RP335
DP337
LP301
RP306
TP322
CP301
RP305
TP321
DP324
CP327
CP326
CP307
CP328
BP301
BP301A
BP301B
HP301
BP303
BAR CODE

SOLDER SIDE - COTÉ CUIVRE - LÖTSEITE - LATO SALDATURE - LADO DEL COBRE



PCB POWER DVD COMBO
21074240
LP303
TP323
RP532
TP325
TP322
RP537
TP321
RP533
RP555
RP556
BP303
HP304
STDBY
GND
7V/FL
+5V6
GND
+8V
+12V

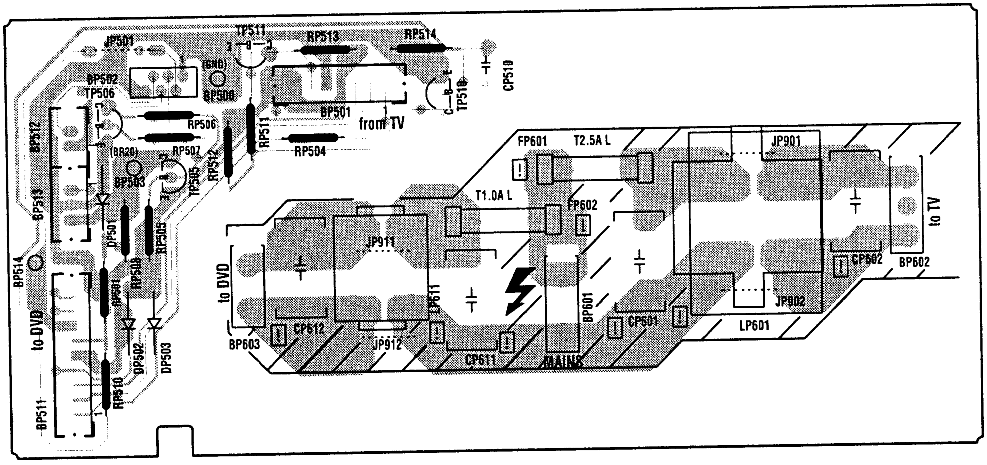
POWER DISTRIBUTION BOARD - INTERFACE SECTEUR - LEITERPLATTE SPANNUNGSVERTEILUNG
PIASTRA DISTRIBUZIONE ALIMENTAZIONI - PLACA DE DISTRIBUCION DE LA ALIMENTACION


BP601
FP602
T1.0A
FP601
T2.5A
CP601
100N0
LP601
15MI0
JP901
NI
JP902
NI
CP602
100nF
CP611
100N0
LP611
47MI0
JP911
NI
JP912
NI
CP612
100nF
CH200
MAIN
SWITCH
MAINPLUG
(180-264)V~
50/60Hz
BP602
BP001
POWER/SCAN BOARD
ICC20 CHASSIS
BP603
BP301
POWER BOARD
DVD
HK001<=BP511
to DVD Keyboard
LED_R
LED_G
IR
+5V_ECO
KEYB
INT
DP503
BAT42
RP504
270R0
DP502
BAT42
RP510
56K0
RP501
1K0
DP501
1N4148
RP512
10K0
RP511
10K0
RP513
4K7
CP510
100N0
TP510
BC546B
TP511
BC546B
RP514
56K0
BP501
LED_R
LED_G
IR
5V_UP
KEYB
5V_UP
BR001
REMOTE PART
ICC20 CHASSIS - SMALL SIGNAL BOARD
BP514
to MK08
DVD KDB2
RP505
10K0
TP505
BC556B
RP506
4K7
TP506
BC546B
RP507
100R0
BP502
RESTART/DVD
ON
IIC_CL1
IIC_DA1
BR002
REMOTE PART
PD.DVD 20000
IFAC
RP508
680R0
+5V
BP503
BP500
BP513
BP512
to DVD KDB2
(+5V 5/HK002)
to DVD KDB2
(⊥ 4/HK002)
+5V ⊥
SCL SDA
BX512
CX501
100N0
+5V
TX501
BC846B
RX501
2K2
BX513
to DVD KDB2
(1-2 / HK002)
RX502
2K2
RX503
1K0
RX504
2K2
TX502
BC846B
RX505
2K2
RX506
1K0
SUB I2C 20000
SUB

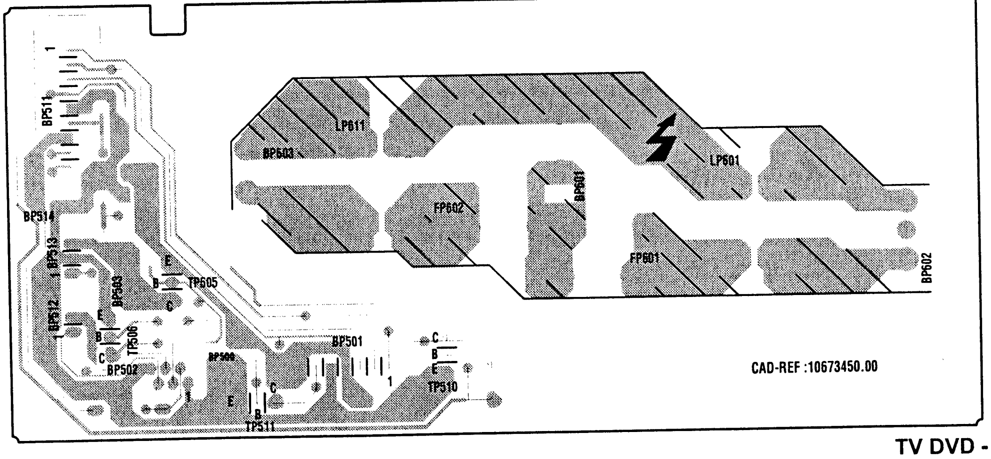
Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chassis conectar a la red.

⚠
Use isolating mains transformer.
Utiliser un transformateur isolateur du secteur.
Einen Trenntrafo verwenden.
Utilizar un transformador aislador de red.
Utilizzare un transformatore per isolarvi dalla rete.

COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES


JP501
TP511
RP513
RP514
CP510
BP502
TP506
(GND)
BP509
TP510
BP501
from TV
RP506
RP511
RP504
BP512
(BR20)
RP507
RP512
BP503
TP505
BP513
DP501
RP508
RP505
BP514
to DVD
RP501
DP502
DP503
RP510
BP511
FP601
T2.5A L
JP901
T1.0A L
FP602
to TV
to DVD
JP911
CP602
BP602
LP611
BP601
JP902
BP603
CP612
JP912
CP611
MAINS
CP601
LP601

SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS

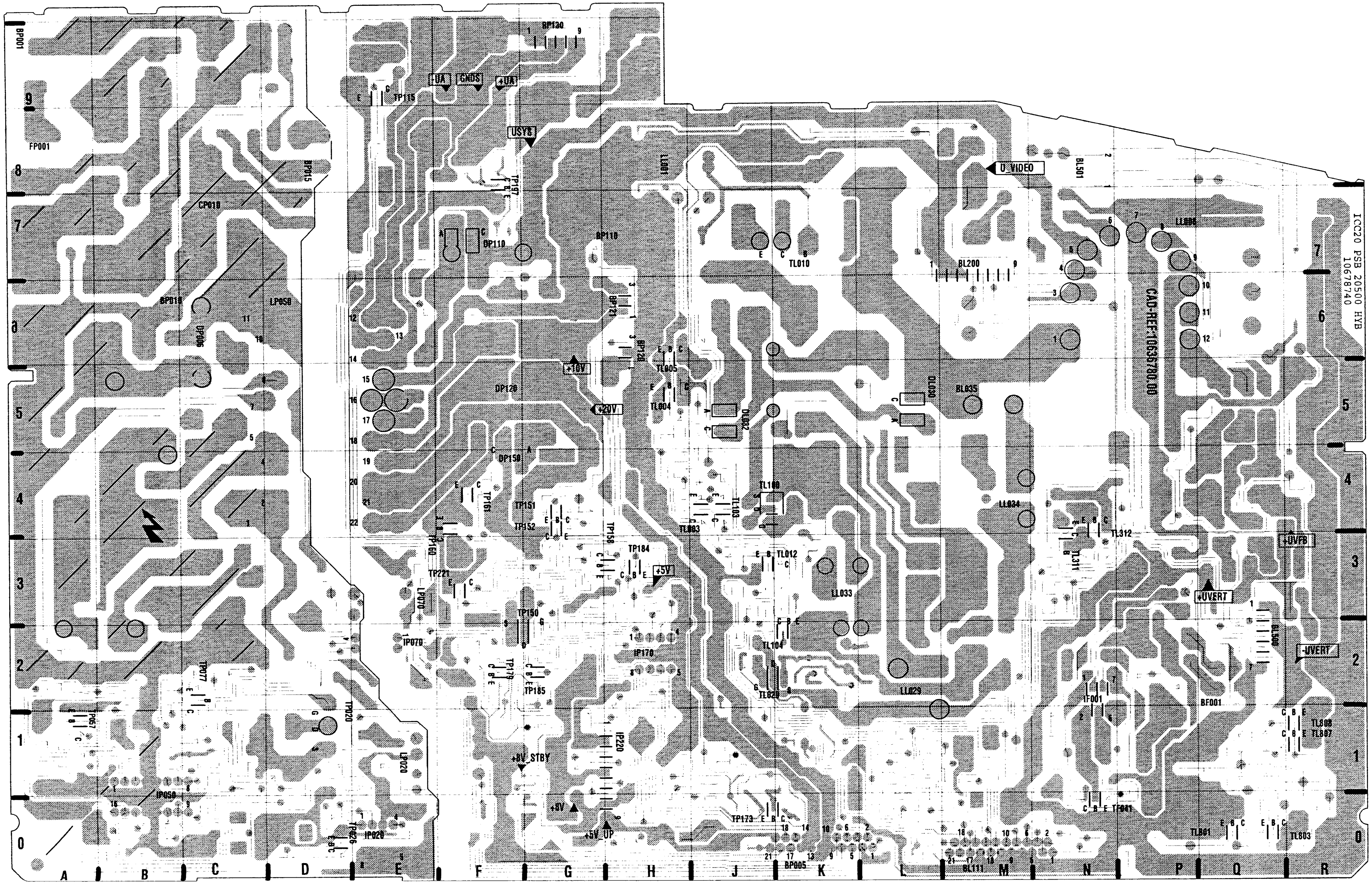

1
BP511
LP611
BP603
LP601
BP601
FP602
BP514
BP513
E
B
TP505
C
FP601
BP602
BP503
BP512
TP506
BP502
BP500
BP501
C
B
E
TP510
E
C
B
TP511

CAD-REF :10673450.00

TV DVD - ICC20
First issue11 / 00

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS


BP001
FP001
BP130
+UA
GNDS
+UA
TP115
USYS
TP197
BP015
CP010
DP110
BP110
LL001
TL010
BL200
U_VIDEO
BL501
LL004
ICC20 PSB 20500 HYB
10678740
CAD-REF:10635780.00
BP010
LP050
DP006
DP121
BP120
+10V
TL005
TL004
+20V
DL032
DL030
BL035
DP120
DP150
TP161
TP151
TP152
TP158
TL100
TL103
TL003
LL034
TL312
TL311
+UVFB
TP160
TP221
TP184
+5V
TL012
LL033
+UVERT
LP070
IP070
TP150
IP170
TL104
BL500
-UVERT
TP179
TP185
TL020
LL029
IF001
BF001
TP077
TP061
TP020
LP020
IP220
+8V_STBY
TL808
TL807
IP050
+5V
+5V_UP
TP173
BP005
BL111
TF041
TL801
TL803
IP020
TP026
A
B
C
D
E
F
G
H
J
K
L
M
N
P
Q
R
0
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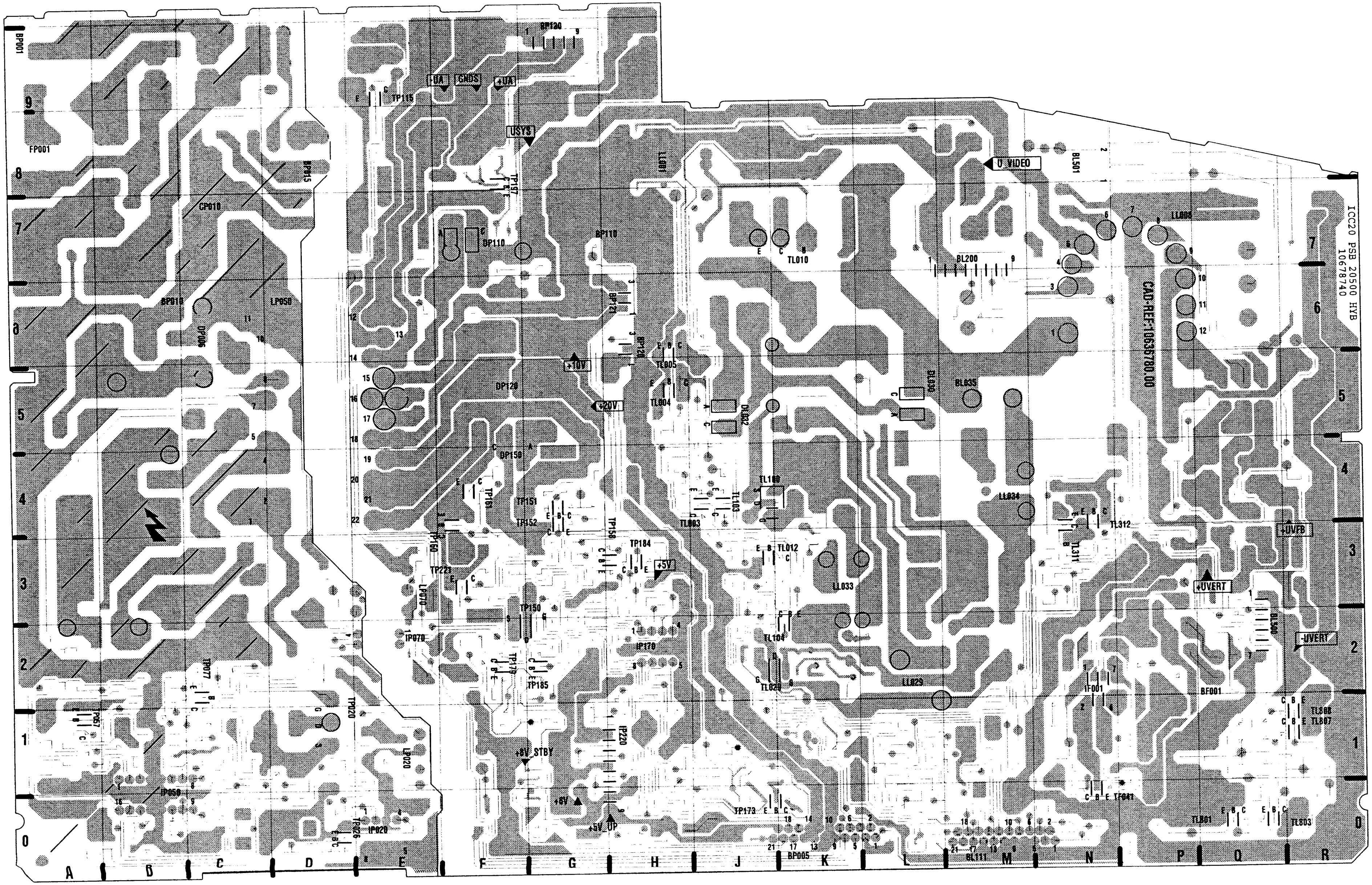
9

ICC20
First issue 05 / 00

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS


BP001
FP001
BP120
+UA
GNDS
+UA
TP115
USYS
TP157
BP015
CP018
DP110
BP110
BP121
BP123
TL005
TL004
DL032
TL010
BL200
U_VIDEO
BL501
LL008
ICC20 PSB 20500 HYB
10678740
CAD-REF:10636780.00
BL030
BL035
+10V
+20V
DP120
DP150
BP018
LP050
DP006
TP151
TP152
TP161
TP158
TP184
+5V
TL003
TL100
TL103
TL012
LL033
LL034
TL312
TL311
+UVFB
+UVERT
-UVERT
TP221
TP160
LP070
TP150
IP070
IP170
TP179
TP185
TL104
TL020
LL029
IF001
BF001
TL808
TL807
TP077
TP020
LP020
+5V_STBY
IP220
+5V
+5V_UP
TP173
BP005
BL111
TF041
TL801
TL803
IP050
IP028
A
B
C
D
E
F
G
H
J
K
L
M
N
P
Q
R
0
1
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4
5
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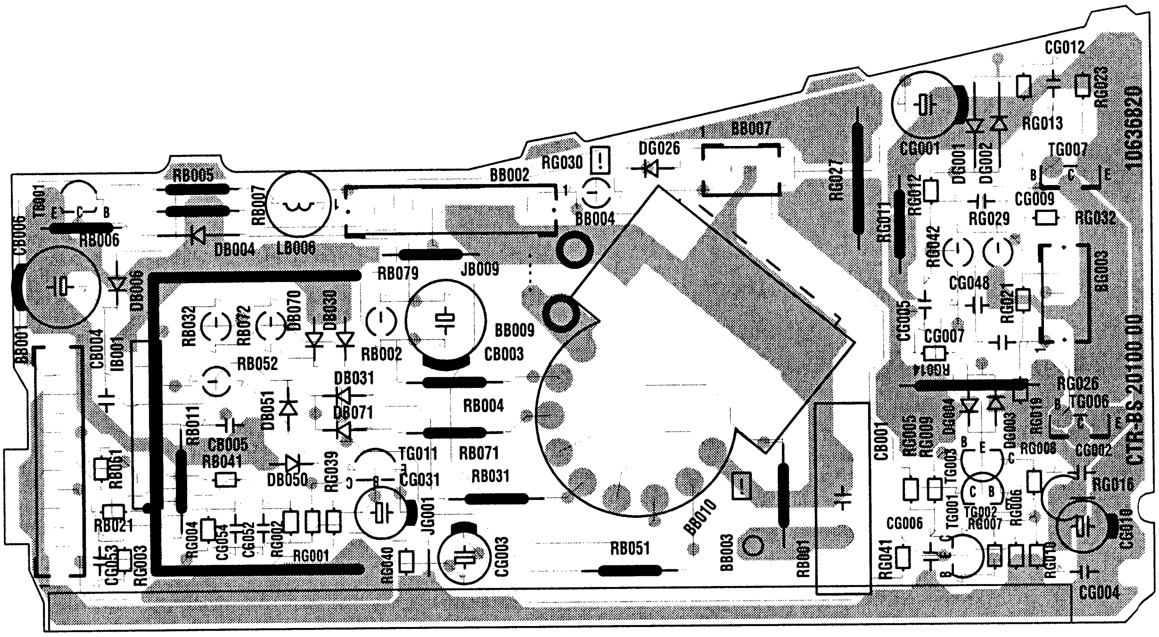
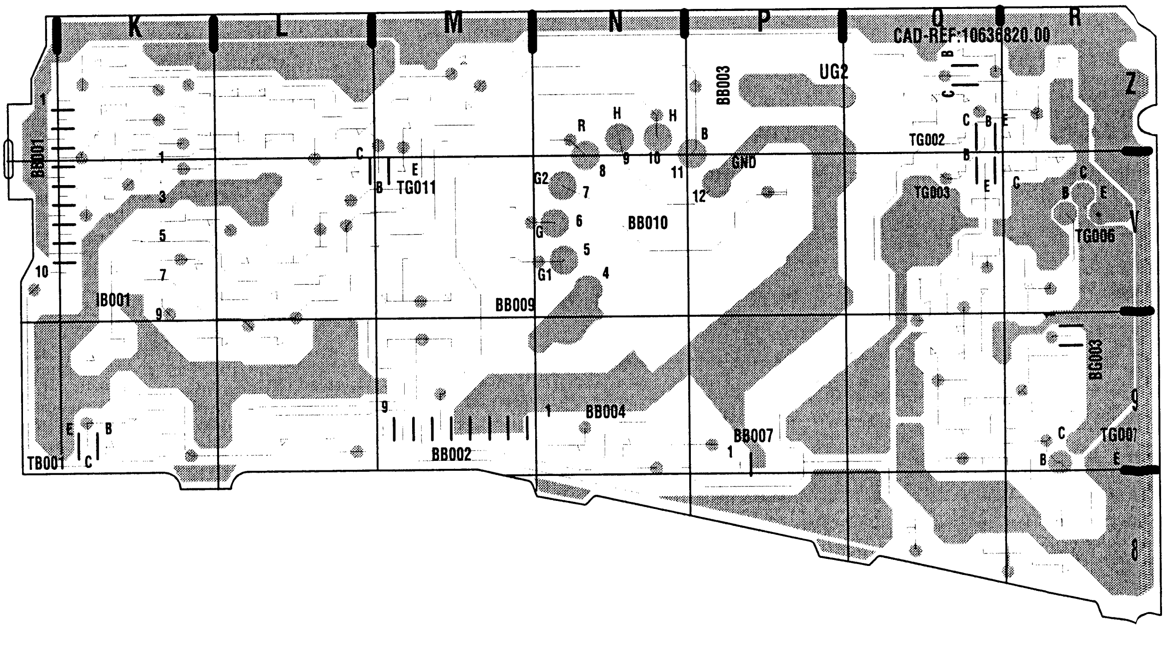
8
9

VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE - PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO

COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES

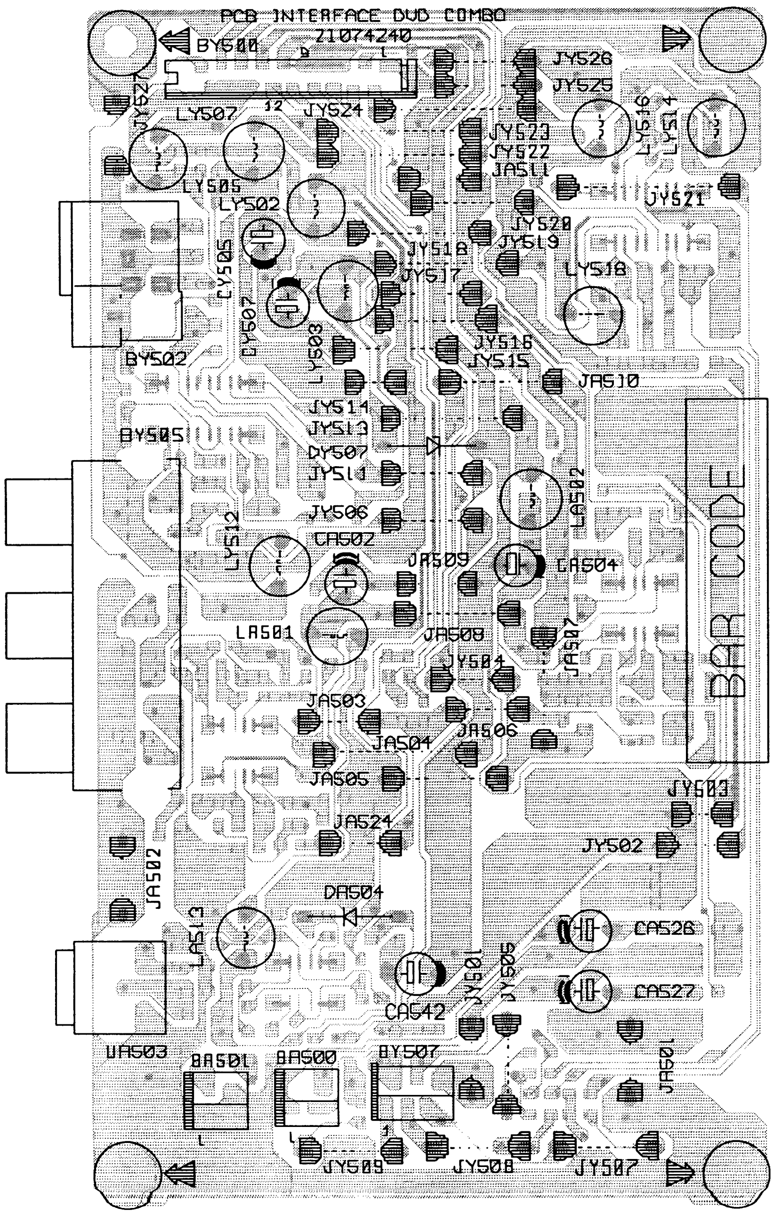

CG012
RG023
10636820
RG013
TG007
CG001
DG001
DG002
1
BB007
DG026
RG030
BB002
RB005
TB001
RB006
DB004
RB007
LB006
BB004
RG027
RG011
RG012
CG009
RG029
RG032
RG042
CG048
BG003
CB006
DB006
RB079
JB009
BB001
CB004
IB001
RB032
RB072
DB070
DB030
RB002
BB009
CB003
CG005
CG007
RG021
RG014
RB052
DB031
DB071
RB004
RG026
TG006
RB011
CB005
RB041
DB051
DB050
RG039
TG011
CG031
RB071
RB031
CB001
RG005
RG009
DG004
DG003
RG019
RG008
CG002
RG016
CTR-BS 20100.00
RB061
RB021
RG004
CG054
CG052
RG002
RG001
JG001
RG040
CG003
BB010
RB051
BB003
RB001
CG006
TG001
TG003
TG002
RG007
RG006
RG041
RG010
CG010
CG004
CG053
RG003

SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS

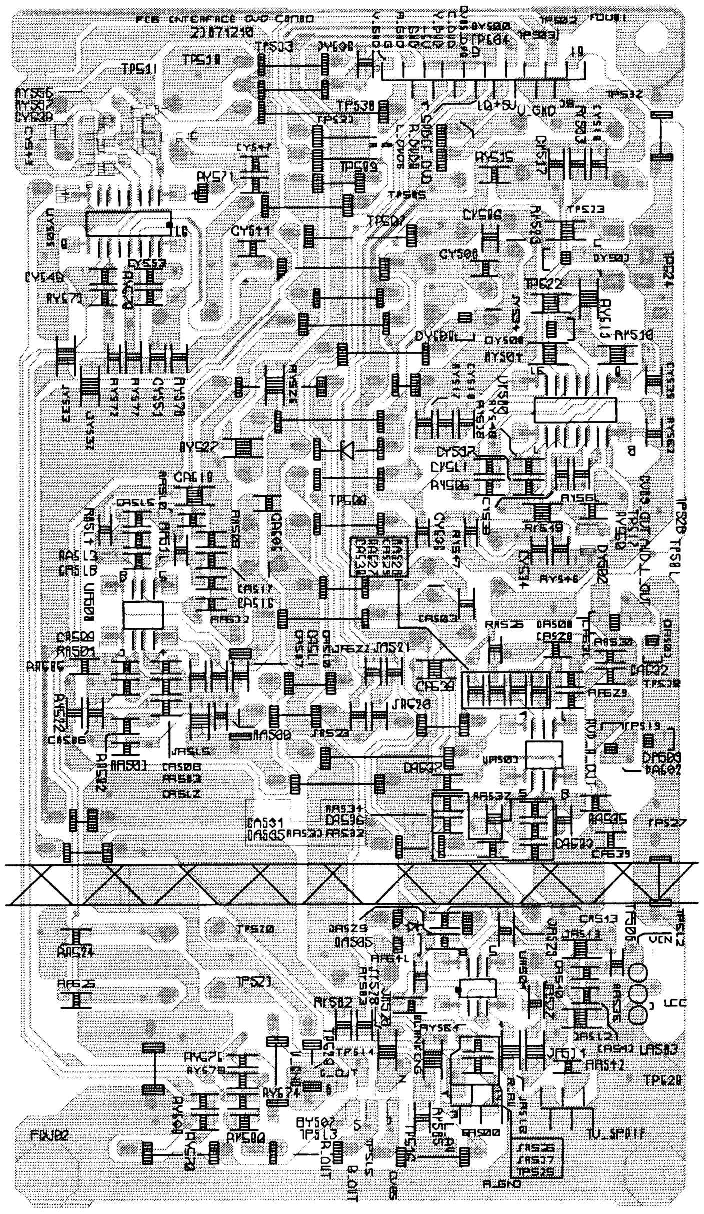

K
L
M
N
P
Q
R
CAD-REF:10636820.00
BB003
UG2
Z
BB001
1
3
5
7
9
10
IB001
TG011
R
H
H
G2
G
G1
8
9
10
11
12
7
6
5
4
BB010
GND
BB009
TG002
TG003
TG006
V
BG003
TG007
TB001
BB002
BB004
BB007
1
9
8

AV INTERFACE PRINTED CIRCUIT BOARD - CIRCUIT IMPRIME DE LA PLATINE INTERFACE AV - LEITERPLATTE INTERFACE AV - PIASTRA INTERFACE AV - PLATINA INTERFACE AV

COMPONENT SIDE - COTÉ COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI -
LADO COMPONENTES


PCB INTERFACE DVD COMBO
21074240
BY500
JY526
JY525
JY527
LY507
JY524
LY516
LY514
JY523
JY522
JA511
LY505
LY502
JY521
JY520
JY519
JY518
JY517
LY518
CY505
CY607
LY503
BY502
JY516
JY515
JA510
JY514
JY513
BY505
DY507
JY511
JY506
LY512
CA502
LA502
JA509
LA504
LA501
JA508
JY504
JA507
BAR CODE
JA503
JA504
JA506
JA505
JY503
JA524
JY502
JA502
DA504
LA513
CA526
JY501
JY505
CA542
CA527
UA503
BA501
BA500
BY507
JA501
JY509
JY508
JY507

SOLDER SIDE - COTÉ CUIVRE - LÖTSEITE - LATO SALDATURE - LADO DEL COBRE


PCB INTERFACE DVD COMBO
21071210
TP511
TP510
TP503
TP530
TP509
TP505
TP507
TP522
TP523
TP532
TP508
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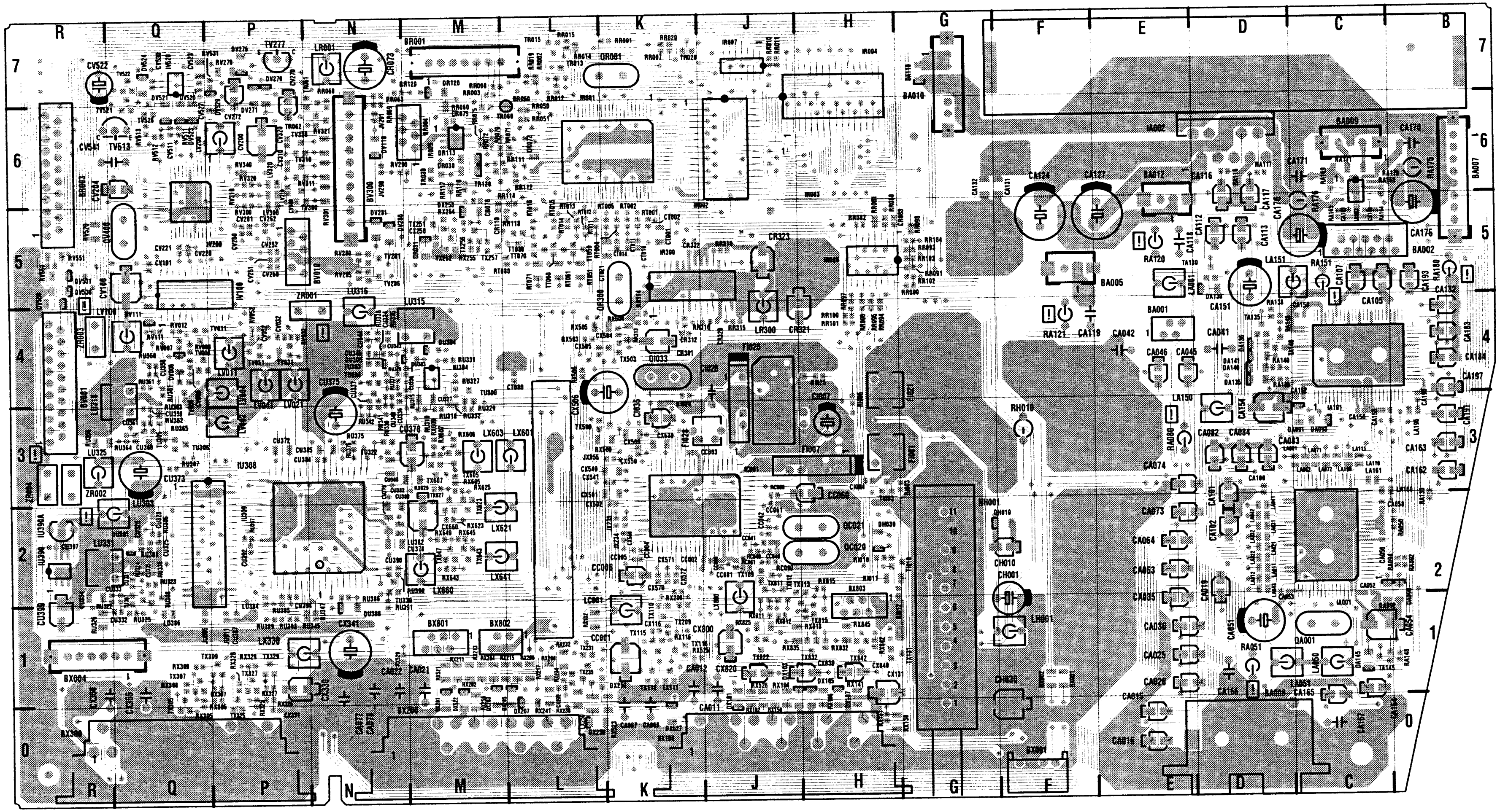
TP510
TP521
TP514
TP529
TP527
TP528
RY515
RY513
RY510
RY571
CY511
CY549
CY547
CY516
CY508
CY512
CY561
DY508
DY507
DY601
RY507
RY527
CA510
RA513
UA501
CA532
CA521
RA525
CA520
JA520
RA500
RA523
RA501
CA508
RA531
RA532
DA542
UA503
RA535
CA539
CA513
LA503
RA542
TV_SPDIF
FOU02
FOU01
A_GND
V_GND
LQ+5V
LYC
LCR
VEN

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

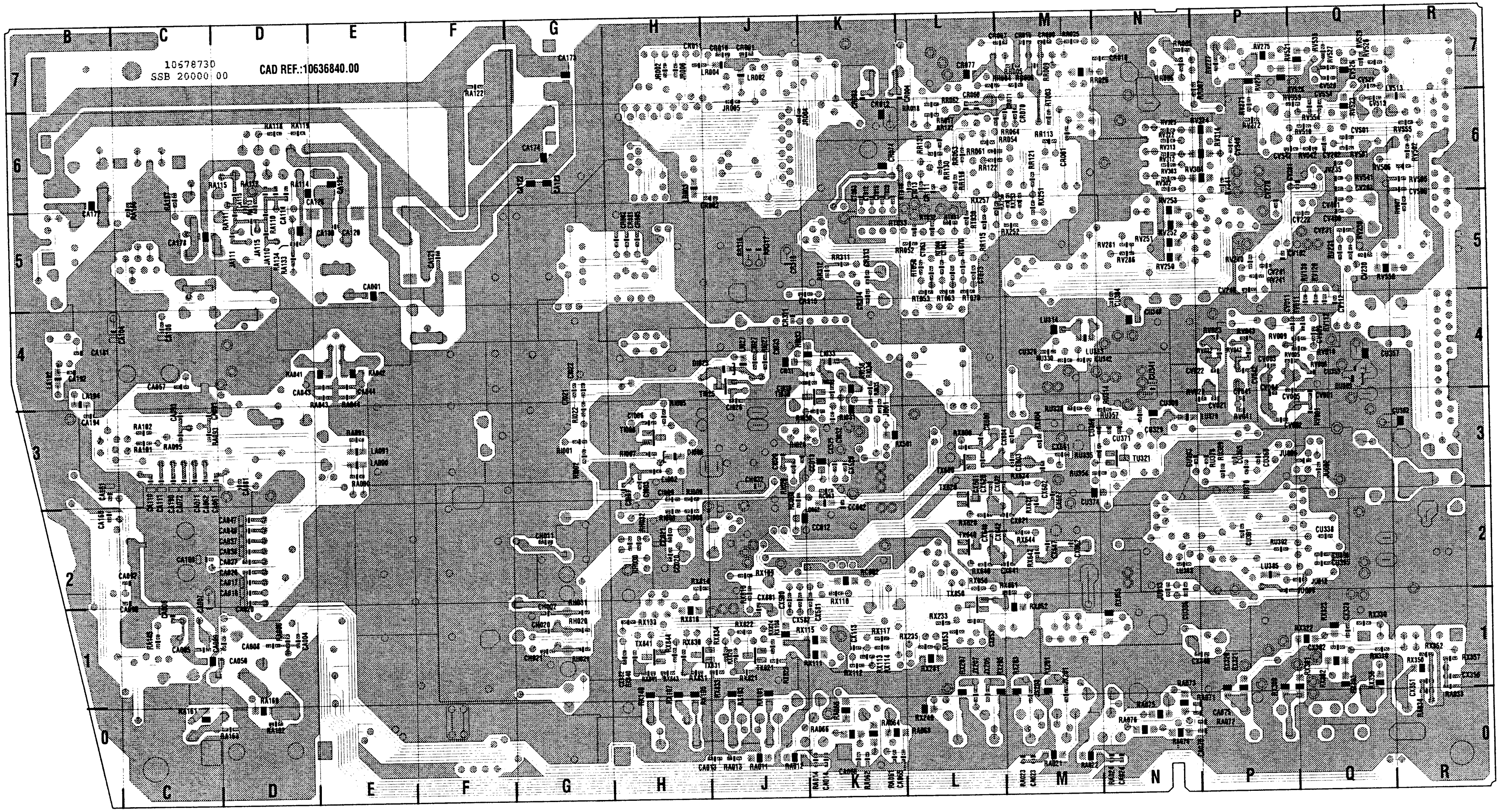
COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES



R
Q
P
N
M
L
K
J
H
G
F
E
D
C
B
7
6
5
4
3
2
1
0

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS



10678730
SSB 20000 00
CAD REF.:10636840.00
B
C
D
E
F
G
H
J
K
L
M
N
P
Q
R
7
6
5
4
3
2
1
0

THOMSON MULTI MEDIA

ICC20 Small Signal Board (SSB) exchange method

Escaping production mode

The replacement board will be delivered in the production mode; this can be easily switched to normal operation once the television has been switch ON by pressing and holding the VOL – (minus) button for approximately 5-seconds.

Setting the language

The board will be delivered with its menus in French.

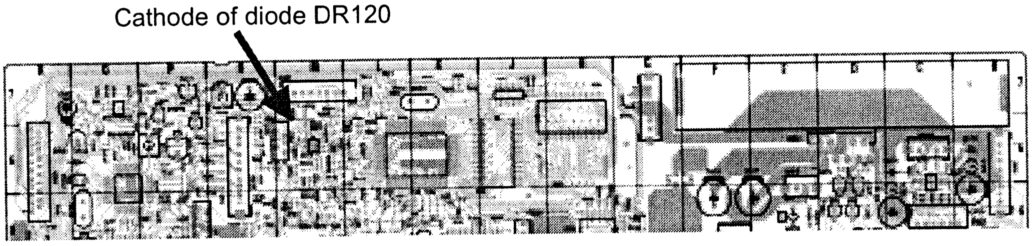
If you want to select another language proceed as follows: -

- Press the ″Menu″ key on the remote control unit (RCU)
- In the ″Sommaire″ menu select the ″Installation″ sub-menu, and then select ″Reglages personnels″.
- In the ″Reglages personnels″menu select ″Langues des menus″.
- Now select the menu language you require, once selected press the ″Exit″ key on the RCU.

Saving the NVM data

Once fitted, the board has to be aligned and adjusted in the Service Mode, however it is possible to save time by copying the contents of the NVM onto a computer without de-soldering it from the board as follow: -

1. Force the microprocessor into the reset mode by connecting the **reset** pin to ground. The best point to pull down the **reset line** is at the cathode of diode DR120 (not fitted).
2. Temporally re-connect the faulty SSB board.
3. Switch ″ON″ the television.
4. Now the contents of the NVM can be saved to a PC via the TECI bus, an interface kit for copy the NVM content is available from After Sales under Part No. **10613570**

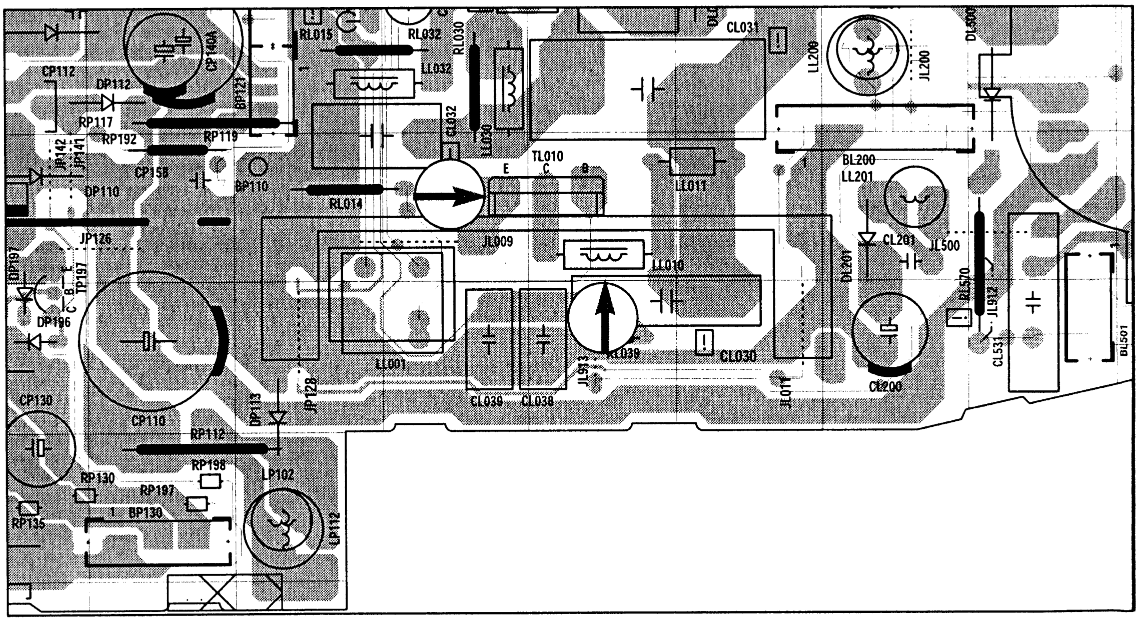


Service Mitteilungen

Betroffene Geräte/Chassis : ICC20

Symptom :
Heller vertikaler Streifen in der Mitte des Bildes.

Abhilfe :
Parallel zur Spule LL010 eine Diode RGP15G, ET-Nr. 102 728 00, löten. Die Kathode an den Kollektor des Transistors TL010.


CP112
DP112
CP140A
BP121
RL015
RL032
RL030
LL032
CL032
LL030
RP117
RP192
RP119
JP142
JP141
CP158
BP110
DP110
RL014
TL010
E
C
B
JL009
JP126
DP197
TP197
E
B
C
DP196
LL001
LL010
CL039
CL038
JL913
RL039
CL030
JL011
CP130
CP110
DP113
JP128
RP112
RP198
RP130
RP197
BP130
RP135
LP102
LP112
CL031
LL200
JL200
BL200
LL201
LL011
CL201
JL500
DL201
RL570
JL912
CL531
CL200
BL501

IRIS CODE: Der Code, wie unten beschrieben, wird gebraucht um die Fehler im Garntiepapier aufzuführen.Es wird damit beabsichtigt Ihnen den Bericht leichter und zuverlässiger zu machen.

Zustand/ Symptom	Teilenummer	Menge	Position	Sektion	F.Code	R. Code
1 3 2 x	1 0 2 7 2 8 0 0	0 1	T L 0 1 0	D F L	☐ Z	☐ K

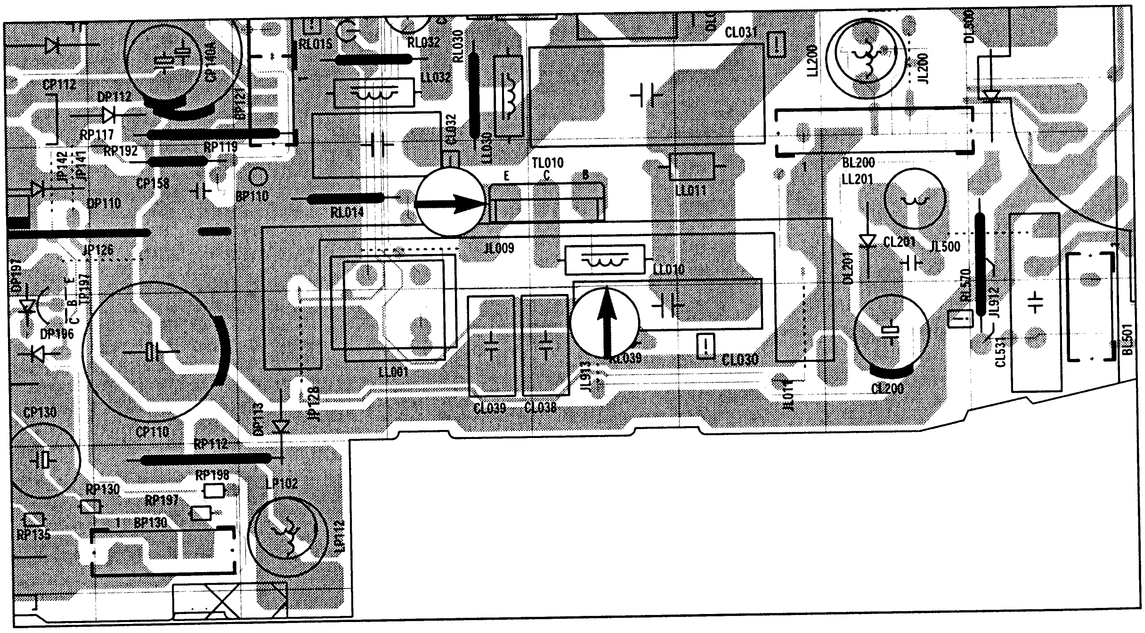
Die weißen Kästchen müssen nicht ausgefüllt werden. ☐

TECHNICAL INFORMATION

Finished products / Chassis concerned : ICC20

Symptom / Problem observed :
Light vertical band down the centre of the screen.

Solution :
Add an RGP15G diode **(Part No. 10272800)** in parallel with inductor LL010 on copper side of the power and deflection printed circuit board. (diodes cathode to the collector of TL010)


CP112
DP112
RP117
RP192
RP119
JP142
JP141
CP158
BP110
DP110
CP110A
DP127
RL015
RL032
LL032
RL030
CL032
LL030
RL014
TL010
E
C
B
CL031
LL011
LL200
JL200
DL300
BL200
LL201
CL201
JL500
DL201
RL570
JL912
CL531
BL501
CL200
JL009
LL010
RL039
CL030
JL913
JL011
LL001
CL039
CL038
JP126
DP197
JP197
DP196
CP130
CP110
RP112
DP113
JP128
RP198
LP102
LP112
RP130
RP197
BP130
RP135

IRIS CODE : The code mentioned below must be used to report the failure in the warranty sheet. It is proposed to make your report easier and more reliable.

Condition/ Symptom/	Part Code Number	Qty	Position	Section	Fault Code	Repair Code
1 3 2 X	1 0 2 7 2 8 0 0	0 1	D L 0 1 2	D F L	☐ Z	☐ K

You do not need to write anything in the white boxes ☐

TECHNICAL INFORMATION

Finished products / Chassis concerned : ICC20

Object / Improvement of the demodulated picture in L standard (France only)

Symptom / Problem observed :

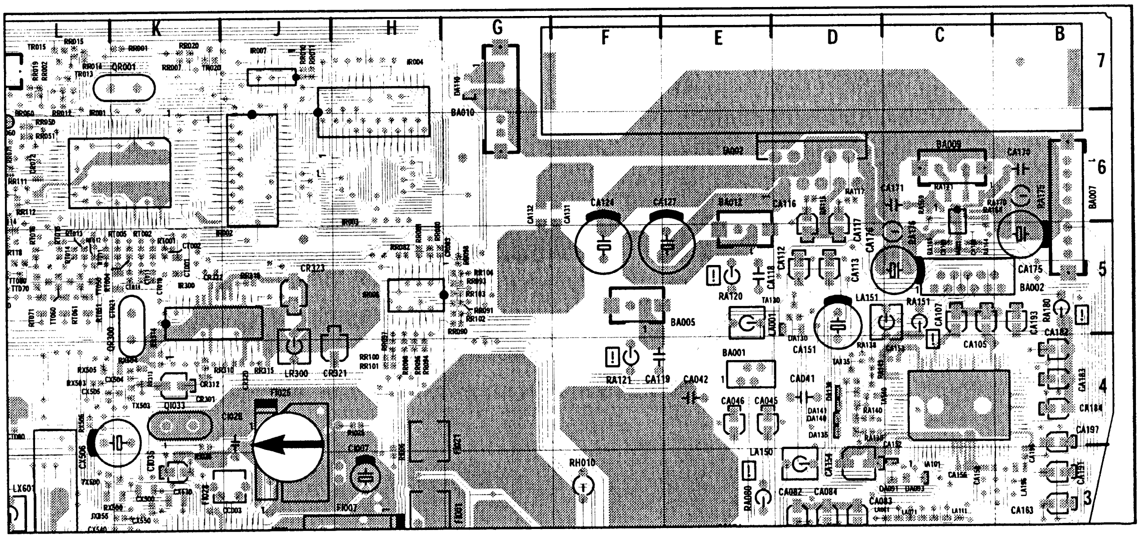
Light horizontal band at the top of the picture, mainly visible on programme 5. (la 5 & Arte)

Cause :

AGC too time constant too fast.

Solution :

Replace metalised polyester capacitor in position CI028 (1µF) by 2.2µF 50V. **(Part N° 13085600)**



IRIS CODE : The code mentioned below must be used to report the failure in the warranty sheet. It is proposed to make your report easier and more reliable.

Condition/ Symptom/	Part Code Number	Qty	Position	Section	Fault Code	Repair Code
1 3 2 X	1 3 0 8 5 6 0 0	0 1	C I 0 2 8	I F C	☐ Y	☐ A

You do not need to write anything in the white boxes ☐

THOMSON MULTI MEDIA

TV - DVD

Brandt FERGUSON SABA TELEFUNKEN THOMSON

PARTS LIST
LISTE PIECES DETACHEES
ERSATZTEILLISTE
LISTA PARTI DI RICAMBIO
LISTA DE PIEZAS DE REPUESTO

THOMSON
32WT45ES
Chassis ICC20 TV / DVD

MODULES

PSB	**C20PB20 B*PW****0* 00**	**10675420**
SSB	**C20SB20 B5**08RD31**	**10684580**
AUDI	**PA/SW20000**	**10626290**
IFAC	**POWER DISTRIBUTION**	**10673240**
MPEG	**MPEG**	**21054290**
SMPS	**SMPS**	**21049990**
IFAC	**AV INTERFACE**	**21054300**
KB	**KDB1-2**	**21049130**

FP360,362, **ZP**009	MP315	⚠ 10575090
FP361	RXE025	⚠ 10529720
FP390	RXE090	⚠ 10529790
GK101	TSOP1333	25358570
IA000	TDA7298	10348810
IB001	TDA6108JF	10616240
IF001	TDA8177F	10352880
IK001	TMP87PS38F OTP S2.0 FLAT	21055500
IK003	TFMS5330B	20627780
IP020	VIPER20DIP	25408950
IP050	TEA2262	10495720
IP070,301,305	TLP621 GR(D4-LF2 T)	⚠ 20827900
IP170	LM393/NJM2903D	46069900
IP220	TDA8139	10044580
IP302	MC7808CT	10263430
IP303	PQ3RD13	15168930
IP350	TL431	15069010
UA500,501	MC33078D FLAT	10319560
UY500,505	TSH94D FLAT	15282180
ZL221,251	MP125	⚠ 10469180
ZL231	MP40	⚠ 10469170

TA401,**TF**041, **TL**103,312,803, **TP**173,179,505	BC556B	16001020
TB001,**TL**311	BF422	16003090
TG001	BF199	16002950
TG002	BF370	25420830
TG006	BD140-16	25425020
TG007	BD139-16	16001760
TG011,**TL**003, 104,801,**TP**026, 080,115,151, 152,158,160, 161,184,185, 197,221,506, 510,511	BC546B	45001866
TK001	BC848B SMD	16006290
TL004	MPSW01A	70436520
TL005	MPS750	16001340
TL010	ON4977/BU2525AX	10461310
TL029,100	STP10NB20FP	25414550
TL807	BC327-40	16000450
TL808,**TP**057	BC337-40	45001466
TP020	STH13NB60FI	25381050
TP150	STP22NE03L (TO220)	25341950
TP320	2SK2605	⚠ 20880040
TP321	MCR106-6 400V 4A	20813760
TP322,393	BC548B	16000930
TP323	KTC8550D	21039270
TP325,350,392	BC558B	16001110

DA400,**DG**001, 002,003,004, **DL**001,073,805, **DP**024,054,055, 057,064,069, 115,158,160, 161,170,183, 188,193,194, 196,197,221, 230,501	1N4148	44009209
DA500,501,502, 503,**DY**500,501, 502	BZT55C15 SMD	15187290
DB004	1N4004	44009009
DB006,030,031, 050,051,070, 071,**DL**043,305, **DP**023,342	BAV21	44044407
DF011	BZW04-58	10368210
DF031,033, **DL**302,303, **DP**061,220,361	RGP10G	10459090
DG026	BZX55C6V8	50890650
DK005	LL4148 SMD	16012450
DK006	BZT55C5V1 SMD	15196090
DK007	ZMM2,7 SMD	16030100
DL028,222,252	1N4001	16008160
DL029	RGP02-20	10472330
DL030	DTV32F-1500	10452490
DL032	STTA806DI	25422190
DL034,036,102	EGP10D	20953640
DL101	BZX55C13	70438310
DL201,**DP**112	MUR1100E	10360280
DL221,251	FUF5402	10458530
DL231,**DP**020, 051,113	FUF4005/MUR160	16009580
DL301	BZX85C18	50890010
DP001,002,003, 004,006	GP30M	10455410
DP008	FUF5404	20150190
DP021	RGP10M	10455320
DP053,333	BZX55B15/ZPD15 2%	80444020
DP110	BYT08PI-1000	25442210
DP120,140	S410D	10527250
DP130,135	MUR420	16009630
DP150	BYW29-150	16009140
DP152	ZPD10 2%	80444160
DP301,302,303, 304	BYW27-1000	10455390
DP323,330	ZPD8,2	44021504
DP324	ZPD24	44016504
DP325,337,390, 391	RGP15G	10272800
DP350	ZPD4,7/BZX55C4V7	20475400
DP360,362	1N5822	44058204
DP392	BZX55B5V1/ZPD5V1 2%	44035702
DP502	BAT42	16007410
GE101	TLUV5300 LED	11137650
GK001	LTL-1BEHJ OG/P-GN	21085280

R : RECYCLED PART
: PIECE RECYCLEE
: AUSTAUSCHTEILE
: RICAMBIO RICICLATO
: MODULO REPROCESADO

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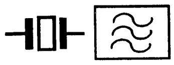
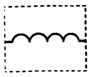
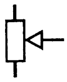


QK001	8M0HZ	21063030



LF021	22U0H 10% 1,6A	10470180
LL029	OST-WEST SPULE	10347650
LL034		10679870



PP180	1K0 OHM	70434550

RA407	4R7 OHM 5% 0,35W	⚠ 10226310
RB001,004	1K5 OHM 5% 0,50W	10121880
RB031,051,071	560R0 OHM 10% 0,50W	10257590
RB032,052,072, **RE**102,**RP**181	100R0 OHM 5% 0,25W	30943330
RF003,006	1K3 OHM 1% 0,40W	15012810
RF008	1R5 OHM 1% 0,70W	10451140
RF011,012	1R82 OHM 1% 0,70W	10451420
RG026,027	3K3 OHM 5% 3W	30941170
RG030,**RL**808, 809	22R0 OHM 5% 0,25W	⚠ 35031220
RK101	453R0 OHM 1% 0,250W	15018140
RK102	681R0 OHM 1% 0,25W	15020310
RK103	1K5 OHM 1% 0,25W	80437630
RK104	3K32 OHM 1% 0,25W	15017270
RL015	6R8 OHM 5% 0,25W	⚠ 41023309
RL021	1R21 OHM 1% 0,70W	13010820
RL022,**RP**228	1K0 OHM 1% 0,25W	15012570
RL023	3M9 OHM 2% 0,40W	13057750
RL024	100K0 OHM 1% 0,25W	15010160
RL025	1R0 OHM 1% 0,70W	10254220
RL027	2K2 OHM 5% 0,50W	⚠ 10239310
RL037	330R0 OHM 10% 0,50W	14050190
RL044	536K0 OHM 1% 0,25W	15019140
RL100,221,251	0R27 OHM 5% 2,50W	10263600
RL231	4R7 OHM 5% 2,5W	10471330
RL303	33K2 OHM 1% 0,25W	15016530
RL308	15K0 OHM 1% 0,25W	15011700
RL310	46K4 OHM 1% 0,70W	10403710
RL311	2K21 OHM 1% 0,25W	15015480
RP004	2R7 OHM 5% 4,50W	10379110
RP015	18R0 OHM 220V PTC	⚠ 41398800
RP020	100R0 OHM 5% 0,75W	⚠ 10230030
RP049	33R0 OHM 5% 2W	50888890
RP050	10M0 OHM 5% 0,70W	⚠ 20564520
RP051	100R0 OHM 5% 4,50W	10379830
RP052	0R1 OHM 5% 2,50W	⚠ 10288160
RP090	22K1 OHM 1% 0,25W	60442350
RP179	8K25 OHM 1% 0,25W	15021830
RP180	205K0 OHM 1% 0,40W	15013970
RP227	2K26 OHM 1% 0,25W	15015500
RP320,361	1R0 OHM 5% 2,50W	10383240

CB001	10N0F 3K0V	14036450
CB004,**CL**043	100N0F 20% 250V	13072860
CF020	100N0F 10% 100V	20467110
CL030	1N9F 2.5% 2K0V	10532420
CL031	11N6F 2,5% 2K0V	40406501
CL032	33N0F 5% 400V	10076920
CL033	680N0F 5% 400.0V	⚠ 10552180
CL034	12N0F 2% 400V	10672180
CL035	410N0F 5% 400V	10180780
CL038,039	27N0F 5% 250V	50895120
CL100	150N0F 5% 250V	10647360
CL201,221,231, 251	330P0F 20% 1K0V	14035270
CL301	10N0F 5% 400V	10588870
CP001,002,601, 602,611,612	100N0F 20% 275V	⚠ 10331520
CP003,004,005, 304	4N7F 1K0V	10058740
CP006	470N0F 10% 400V	10469630
CP007	560N0F 5% 250V	10376360
CP008,051,121, 131,136,141	470P0F 10% 2K0V	10099390
CP010	390U0F 20% 400V	25444380
CP015	68N0F 20% 250V	10256210
CP020,022	220P0F 10% 1K0V	25460410
CP021	1N0F 5% 400V	13055520
CP049	1N5F 20% 400V	⚠ 10442770
CP050	150P0F 20% 400V	⚠ 20738090
CP052,112	2N2F 10% 1K0V	13090980
CP111	470P0F 10% 2K0V	25392030
CP301,302	100N0F 20% 275V	⚠ 40404090
CP305,306	1N5F 10% 1K0V	20338740
CP308	47U0F 20% 385V	⚠ 50844400
CP309	2N2F 20% 1K0V	43325400
CP315	1N0F 20% 400V	⚠ 43106800
CP362,363,392	1N0F 20% 1K0V	20388780

LL001		10669660
LL008	DSTFBT 1372.0054	⚠ 10675710
LL033		10347660
LL037		⚠ 10518250
LP001,601		⚠ 10203560
LP020	STAND-BY	⚠ 25425970
LP050	SMT7LZ	⚠ 10643540
LP070	DRIVER	⚠ 60412091
LP301,611		⚠ 20247580
LP303	TFSMT	⚠ 2105993A

OTHER PARTS
AUTRES PIECES
SONSTIGE TEILE
ALTRE PARTI
OTRAS PIEZAS

BB010	CATHODE RAY TUBE SOCKET SUPPORT TUBE CATHODIQUE BILDROEHRENFASSUNG SUPPORTO TUBO CATODICO SOPORTE T.R.C	⚠ 80298800
BJ010	CINCH SOCKET PRISE CINCH CINCH-BUCHSE PRESA CINCH TOMA CINCH	10037440
BJ011	SVHS SOCKET PRISE SVHS S-VHS-BUCHSE PRESA SVHS TOMA SVHS	20392900
BK004	CABLE 6X 255MM CABLE NAPPE 6X 255MM FOLIENKABEL 6X 255MM CAVO DI COLLEGAMENTO 6X 255MM CABLE 6X 255MM	⚠ 21089390
BK005	CABLE 11X 340MM CABLE NAPPE 11X 340MM FOLIENKABEL 11X 340MM CAVO DI COLLEGAMENTO 11X 340MM CABLE 11X 340MM	21082290
BQ012	JACK SOCKET PRISE JACK BUCHSE PRESA JACK TOMA JACK	10539510
BU702	CABLE 19X 70MM CABLE NAPPE 19X 70MM FOLIENKABEL 19X 70MM CAVO DI COLLEGAMENTO 19X 70MM CABLE 19X 70MM	21067570
BY500	CABLE 19X 70MM CABLE NAPPE 19X 70MM FOLIENKABEL 19X 70MM CAVO DI COLLEGAMENTO 19X 70MM CABLE 19X 70MM	21063420
BY502	SVHS SOCKET PRISE SVHS S-VHS-BUCHSE PRESA SVHS TOMA SVHS	20862120
BY505	CINCH SOCKET 3 ASSY ENSEMBLE 3 PRISES CINCH CINCH 3 BUCHSEN-EINHEIT ASSIEME 3 PRESA CINCH CONJUNTO 3 TOMA CINCH	21063440
CH200	ON/OFF SWITCH CONTACTEUR MARCHE/ARRET EIN-AUS SCHALTER CONTATTORE ACCESO/SPENTO CONTACTOR MARCHA/PARADA	⚠ 10276500
CJ015	CABLE WITH CONNECTOR 9 PINS 340MM CABLE AVEC CONNECTEUR 9 VOIES 340MM KABEL MIT VERBINDER 9 PINS 340MM CAVO CON CONNETTORE 9 SPINOTTI 340MM CABLE CON CONECTOR 9 PUNTOS 340MM	10231790

CJ016	CABLE WITH CONNECTOR 3 PINS 220MM CABLE AVEC CONNECTEUR 3 VOIES 220MM KABEL MIT VERBINDER 3 PINS 220MM CAVO CON CONNETTORE 3 SPINOTTI 220MM CABLE CON CONECTOR 3 PUNTOS 220MM	25459200
CJ020	CABLE WITH CONNECTOR 10 PINS 340MM CABLE AVEC CONNECTEUR 10 VOIES 340MM KABEL MIT VERBINDER 10 PINS 340MM CAVO CON CONNETTORE 10 SPINOTTI 340MM CABLE CON CONECTOR 10 PUNTOS 340MM	10526610
CJ030	CABLE WITH CONNECTOR 6 PINS 500MM CABLE AVEC CONNECTEUR 6 VOIES 500MM KABEL MIT VERBINDER 6 PINS 500MM CAVO CON CONNETTORE 6 SPINOTTI 500MM CABLE CON CONECTOR 6 PUNTOS 500MM	25460570
CJ035	CABLE WITH CONNECTOR 3 PINS 580MM CABLE AVEC CONNECTEUR 3 VOIES 580MM KABEL MIT VERBINDER 3 PINS 580MM CAVO CON CONNETTORE 3 SPINOTTI 580MM CABLE CON CONECTOR 3 PUNTOS 580MM	30020170
CJ075	CABLE WITH CONNECTOR 3 PINS 460MM CABLE AVEC CONNECTEUR 3 VOIES 460MM KABEL MIT VERBINDER 3 PINS 460MM CAVO CON CONNETTORE 3 SPINOTTI 460MM CABLE CON CONECTOR 3 PUNTOS 460MM	25443770
CJ076	CABLE WITH CONNECTOR 2 PINS 460MM CABLE AVEC CONNECTEUR 2 VOIES 460MM KABEL MIT VERBINDER 2 PINS 460MM CABLE CON CONNETTORE 2 SPINOTTI 460MM CABLE CON CONECTOR 2 PUNTOS 460MM	25443810
CJ081,143	CABLE WITH CONNECTOR 2 PINS 580MM GREEN CABLE AVEC CONNECTEUR 2 VOIES 580MM VERT CABLE MIT VERBINDER 2 PINS 580MM GRUEN CAVO CON CONNECTOR 2 SPINOTTI 580MM VERD CABLE CON CONECTOR 2 PUNTOS 580MM VERDE	10327420
CJ100	THT CABLE CABLE THT KABEL THT CAVO THT CABLE THT	⚠ 10664300
CJ105	CABLE 460MM 20KV HT CABLE 460MM 20KV HT KABEL 460MM 20KV HT CAVO 460MM 20KV HT CABLE 460MM 20KV HT	⚠ 10369650

CJ145	CABLE WITH CONNECTOR 8 PINS 300MM CABLE AVEC CONNECTEUR 8 VOIES 300MM KABEL MIT VERBINDER 8 PINS 300MM CABLE CON CONNETTORE 8 SPINOTTI 300MM CABLE CON CONECTOR 8 PUNTOS 300MM	25019130
CJ490	CABLE WITH CONNECTOR 7 PINS 260MM CABLE AVEC CONNECTEUR 7 VOIES 260MM KABEL MIT VERBINDER 7 PINS 260MM CAVO CON CONNETTORE 7 SPINOTTI 260MM CABLE CON CONECTOR 7 PUNTOS 260MM	25348010
FP001,601,602	2A5T TIME-LAG FUSE 2A5T FUSIBLE TEMPORISE 2A5T THERMISCHE SICHERUNG 2A5T FUSIBILE TEMPORIZZATO 2A5T FUSIBLE TEMPORIZADO	⚠ 10246750
SK001,002, 003,004,005, 015,016,017, 018,019,020, 021,022,023, 024,025	MICROSWITCH MICRO CONTACTEUR MIKROSCHALTER MICROINTERRUTTORE MICROCONTACTOR	20540300
SK101,102, 103,104	MICROSWITCH MICRO CONTACTEUR MIKROSCHALTER MICROINTERRUTTORE MICROCONTACTOR	30011100
SP015	RELAY 12V RELAIS 12V RELAIS 12V RELE 12V RELE 12V	⚠ 90294100
UA503	OPTICAL SOCKET PRISE OPTIQUE OPTICAL-BUCHSE PRESA OTTICA TOMA OPTICO	15293550

EQUIPMENT/PRESENTATION
EQUIPEMENT/PRESENTATION
AUSSTATTUNG/GEHAEUSE
PARTI VARIE
EQUIPO/PRESENTACION

FRONT PANEL DVD FACADE DVD FRONTPLATTE DVD PANNELLO FRONTALE DVD PANEL FRONTAL DVD	21050580
COVER TRAY CD CACHE TIROIR CD ABDECKUNG SCHUBLADE CD COPERCHIO CASSETTO CD CUBIERTA CORREDERA CD	21050770
LABEL (COVER TRAY CD) ETIQUETTE (CACHE TIROIR CD) ETIKETT (ABDECKUNG SCHUBLADE CD) ETICHETTA (COPERCHIO CASSETTO CD) ROTULO (CUBIERTA CORREDERA CD)	2110522A
BUTTON STRIP DVD CONTROL BARRETTE DE TOUCHES DVD CONTROL TASTENLEISTE DVD CONTROL PIATTINA TASTI DVD CONTROL PLACA DE TECLAS DVD CONTROL	21050610
KNOB OPEN/CLOSE TOUCHE OPEN/CLOSE TASTE OPEN/CLOSE TASTO OPEN/CLOSE TECLA OPEN/CLOSE	21050650
BUTTON STRIP TV CONTROL BARRETTE DE TOUCHES TV CONTROL TASTENLEISTE TV CONTROL PIATTINA TASTI TV CONTROL PLACA DE TECLAS TV CONTROL	21050800
BUTTON STRIP NAVIGATION BARRETTE DE TOUCHES NAVIGATION TASTENLEISTE NAVIGATION PIATTINA TASTI NAVIGAZIONE PLACA DE TECLAS NAVEGACION	21050710
KNOB GUIDE OK TOUCHE GUIDE OK TASTE GUIDE OK TASTO GUIDE OK TECLA GUIDE OK	21050680
TVM502A OPTICAL PLAYER TVM502A LECTEUR OPTIQUE TVM502A CD-LAUFWERK TVM502A ASSIEME OTTICA TVM502A MECANISMO OPTICO	10669590
FRONT PANEL TV FACADE TV FRONTPLATTE TV PANNELLO FRONTALE TV PANEL FRONTAL TV	25455470
REAR PANEL DOS RUECKWAND PANNELLO POSTERIORE TAPA POSTERIOR	⚠ 25465780
JACK PANEL BE15TH TABLEAU DE PRISES BE15TH JACK FRONTPLATTE BE15TH QUADRO DI PRESA JACK BE15TH TABLERO DE TOMA JACK BE15TH	⚠ 25467140
LOGO THOMSON LOGO THOMSON SCHRIFTZUG THOMSON MARCHIO THOMSON LOGOTIPO THOMSON	25376750
CHASSIS SLIDE SECURING GLISSIERE FIXATION CHASSIS SCHIEBER BEFESTIGUNG CHASSIS SVIVOLO DI FISSAGGIO CHASSIS CORREDERA DE SUJECION CHASIS	25413960
LOUDSPEAKER GRID BOOMER BE15TH GRILLE HAUT PARLEUR GRAVES BE15TH LAUTSPRECHER GITTER TIEFTOENER BE15TH GRIGLIA ALTOPARLANTE SUPERIOR BE15TH REJILLA ALTAVOZ GRAVES BE15TH	25465810
8R OHM 12W LOUDSPEAKER 60X160MM 8R OHM 12W HAUT PARLEUR 60X160MM 8R OHM 12W LAUTSPRECHER 60X160MM 8R OHM 12W ALTOPARLANTE 60X160MM 8R OHM 12W ALTAVOZ 60X160MM	25481710
8R OHM 20W LOUDSPEAKER 51X51MM 8R OHM 20W HAUT PARLEUR 51X51MM 8R OHM 20W LAUTSPRECHER 51X51MM 8R OHM 20W ALTOPARLANTE 51X51MM 8R OHM 20W ALTAVOZ 51X51MM	25461220
4R OHM 30W LOUDSPEAKER 130MM 4R OHM 30W HAUT PARLEUR 130MM 4R OHM 30W LAUTSPRECHER 130MM 4R OHM 30W ALTOPARLANTE 130MM 4R OHM 30W ALTAVOZ 130MM	10517870
ON/OFF BUTTON SI01TH TOUCHE MARCHE/ARRET SI01TH EIN-AUS TASTE SI01TH TASTA ACCESSO/SPENTO SI01TH TECLA MARCHA/PARADA SI01TH	25462910

POWER SUPPLY LEAD CORDON D'ALIMENTZATION NETZKABEL CAVO DI ALIMENTAZIONE CABLE DE ALIMENTACION	⚠ 25420360
CORD STOPPER ATTACHE CORDON SECTEUR ZUGENTLASTUNG BRIDA CORDONE DI ALIMENTAZIONE SUJECION CABLE DE ALIMENTACION	25071420
W76EJY011X121 CATHODE RAY TUBE W76EJY011X121 TUBE CATHODIQUE W76EJY011X121 FARBBILDROEHRE W76EJY011X121 TUBO CATODICO W76EJY011X121 T.R.C	⚠ 10670260
DOUBLE DEGAUSSING COIL BOBINE DE DEMAGNETISATION DOUBLE DOPPE ENTMAGNETISIERUNGSSPULE BOBINA DI SMAGNETIZZAZIONE DOPPIA BOBINA DE DESIMANTACION DOBLE	⚠ 10669680
EFC COIL BOBINE EFC EFC-SPULE BOBINA EFC BOBINA EFC	10542150
RCV400 REMOTE CONTROL RCV400 TELECOMMANDE RCV400 FERNBEDIENUNG RCV400 TELECOMANDO RCV400 TELEMANDO	21074280
FOLDING BOX EMBALLAGE CARTON KARTON IMBALLAGGIO CARTONE EMBALAJE CARTON	25417300
FITTING DOWNER CALE INFERIEURE POLSTER UNTEN DISTANZIATORE INFERIORE CALZO INFERIOR	25451020
FITTING UPPER CALE SUPERIEURE POLSTER OBEN DISTANZIATORE SUPERIORE CALZO SUPERIOR	25451030

ICC20 SERVICE MANUAL EUROPE ICC20 DOC TECHNIQUE EUROPE ICC20 TECHNISCHE DOKUMENTATION EUROPE ICC20 DOCUMENTAZIONE TECNICA EUROPE ICC20 DOCUMENTACION TECNICA EUROPE	35118540
DVD17/20 SERVICE MANUAL DVD17/20 DOC TECHNIQUE DVD17/20 TECHNISCHE DOKUMENTATION DVD17/20 DOCUMENTAZIONE TECNICA DVD17/20 DOCUMENTACION TECNICA	35127160
ICC20 TV/DVD SERVICE MANUAL SUPPLEM. ICC20 TV/DVD DOC TECHNIQUE ADDITIF ICC20 TV/DVD TECHNISCHE DOKUMENT. ZUSATZ ICC20 TV/DVD DOCUMENTAZIONE ADDITIVO ICC20 TV/DVD DOCUMENTACION ADICCIONAL	35130200
32WT45ES PARTS LIST 32WT45ES LISTE PIECES DETACHEES 32WT45ES ERSATZTEILLISTE 32WT45ES LISTA PARTI DI RICAMBIO 32WT45ES LISTA PIEZAS DE REPUESTO	35130210
32WT45ES UM NL/DK/S/RU/CS/PL/H/SK 32WT45ES NU NL/DK/S/RU/CS/PL/H/SK 32WT45ES BA NL/DK/S/RU/CS/PL/H/SK 32WT45ES IU NL/DK/S/RU/CS/PL/H/SK 32WT45ES IU NL/DK/S/RU/CS/PL/H/SK	25473580
32WT45ES UM F/D/I/GB/GR/E/P 32WT45ES NU F/D/I/GB/GR/E/P 32WT45ES BA F/D/I/GB/GR/E/P 32WT45ES IU F/D/I/GB/GR/E/P 32WT45ES IU F/D/I/GB/GR/E/P	25466870

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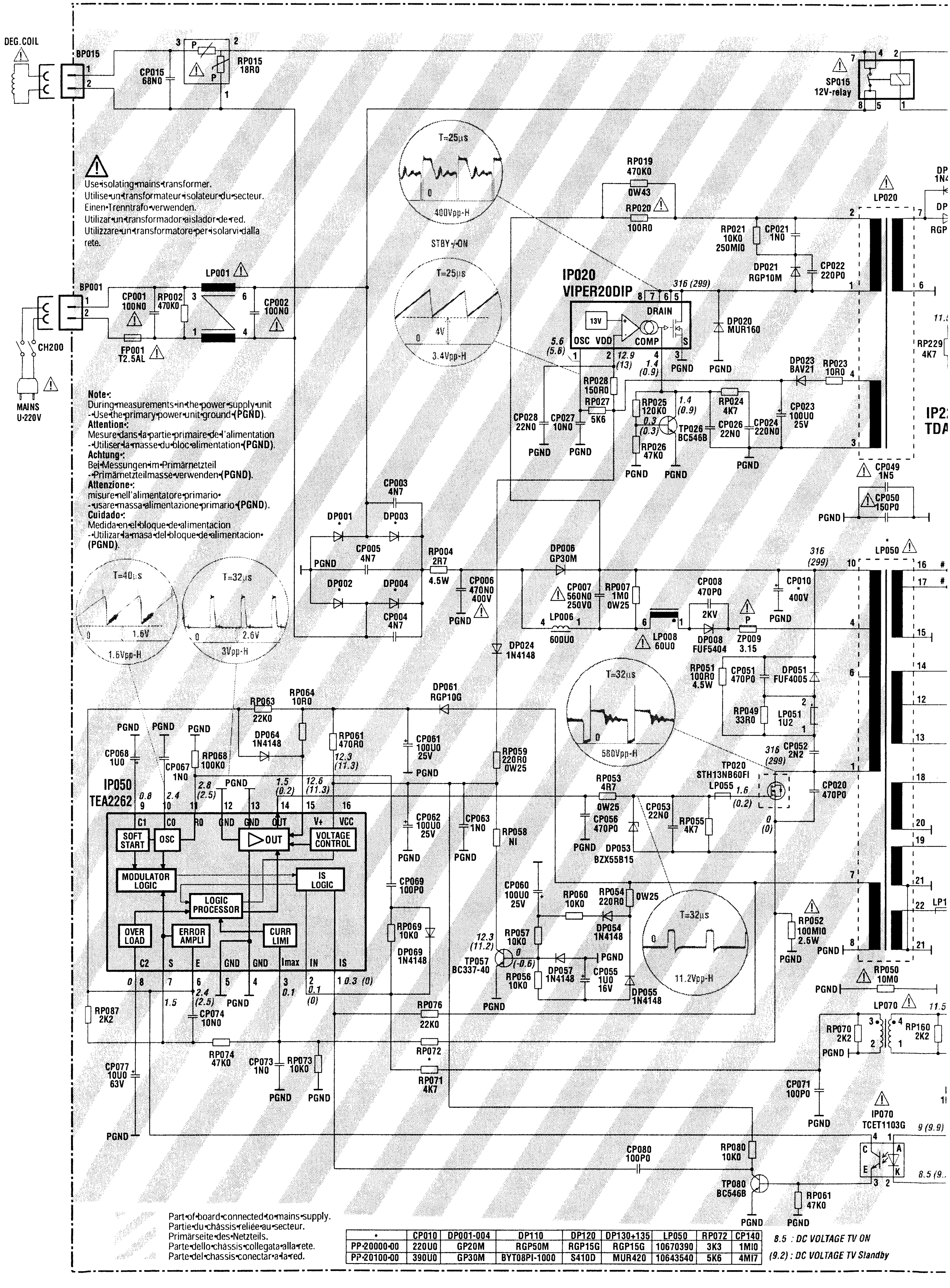
THOMSON multimedia S.A au capital de 932 655 840 € - 46, Quai Alphonse Le Gallo 92648 Boulogne Cedex FRANCE - RCS NANTERRE B 333 773 174

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLA

POWER SUPPLY PART - PARTIE ALIMENTATION - NETZTEIL - ALIMENTAZIONE - ALIMENTACIÓ


DEG.COIL
BP015
CP015 68N0
RP015 18R0
SP015 12V-relay
BP001
CP001 100N0
RP002 470K0
LP001
CP002 100N0
FP001 T2.5AL
CH200
MAINS U-220V
T=25µs
400Vpp-H
STBY-/-ON
T=25µs
4V
3.4Vpp-H
RP019 470K0
0W43
RP020
100R0
IP020
VIPER20DIP
13V
OSC VDD
DRAIN
COMP
PGND
RP028 150R0
RP027 5K6
CP028 22N0
CP027 10N0
RP025 120K0
RP026 47K0
TP026 BC546B
RP021 10K0 250MI0
CP021 1N0
DP021 RGP10M
CP022 220P0
DP020 MUR160
DP023 BAV21
RP023 10R0
RP024 4K7
CP026 22N0
CP024 220N0
CP023 100U0 25V
LP020
IP2
TDA
CP049 1N5
CP050 150P0
CP003 4N7
DP001
DP003
CP005 4N7
DP002
DP004
CP004 4N7
RP004 2R7 4.5W
CP006 470N0 400V
DP006 GP30M
CP007 560N0 250V0
RP007 1M0 0W25
LP006 600U0
LP008 60U0
CP008 470P0
2KV
DP008 FUF5404
ZP009 3.15
CP010 400V
LP050
316 (299)
T=40µs
1.6V
1.6Vpp-H
T=32µs
2.6V
3Vpp-H
DP024 1N4148
RP051 100R0 4.5W
CP051 470P0
DP051 FUF4005
RP049 33R0
LP051 1U2
T=32µs
560Vpp-H
CP052 2N2
TP020 STH13NB60FI
LP055
CP020 470P0
RP063 22K0
RP064 10R0
DP061 RGP10G
DP064 1N4148
RP061 470R0
CP061 100U0 25V
CP068 1U0
CP067 1N0
RP068 100K0
IP050
TEA2262
SOFT START
OSC
OUT
VOLTAGE CONTROL
MODULATOR LOGIC
IS LOGIC
LOGIC PROCESSOR
OVER LOAD
ERROR AMPLI
CURR LIMI
C1 C0 R0 GND GND OUT V+ VCC
C2 S E GND GND Imax IN IS
RP059 220R0 0W25
RP053 4R7 0W25
CP056 470P0
CP053 22N0
RP055 4K7
DP053 BZX55B15
CP062 100U0 25V
CP063 1N0
RP058 NI
CP069 100P0
RP069 10K0
DP069 1N4148
CP060 100U0 25V
RP060 10K0
RP054 220R0 0W25
DP054 1N4148
RP057 10K0
TP057 BC337-40
RP056 10K0
DP057 1N4148
CP055 1U0 16V
DP055 1N4148
T=32µs
11.2Vpp-H
RP052 100MI0 2.5W
RP050 10M0
RP087 2K2
CP074 10N0
RP074 47K0
CP077 10U0 63V
CP073 1N0
RP073 10K0
RP076 22K0
RP072
RP071 4K7
LP070
RP070 2K2
RP160 2K2
CP071 100P0
IP070 TCET1103G
CP080 100P0
RP080 10K0
TP080 BC546B
RP061 47K0
PGND

Use isolating mains transformer.
Utilise un transformateur isolateur du secteur.
Einen Trenntrafo verwenden.
Utilizar un transformador aislador de red.
Utilizzare un transformatore per isolarvi dalla rete.

Note:
During measurements in the power supply unit
- Use the primary power unit ground **(PGND)**.

Attention:
Mesure dans la partie primaire de l'alimentation
- Utiliser la masse du bloc alimentation **(PGND)**.

Achtung:
Bei Messungen im Primärnetzteil
- Primärnetzteilmasse verwenden **(PGND)**.

Attenzione:
misure nell'alimentatore primario
- usare massa alimentazione primario **(PGND)**.

Cuidado:
Medida en el bloque de alimentacion
- Utilizar la masa del bloque de alimentacion **(PGND)**.

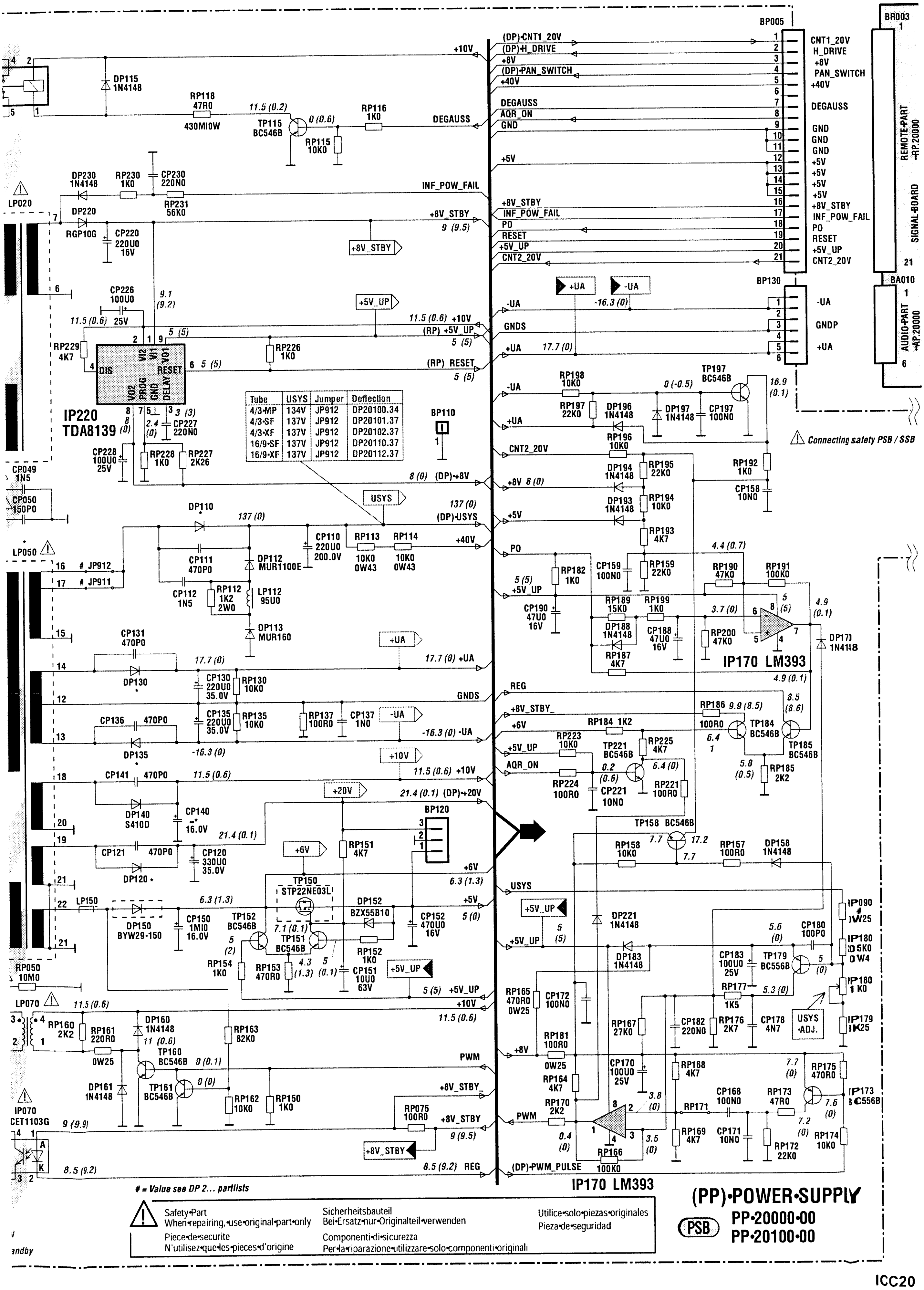
Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del châssis conectar a la red.

*	CP010	DP001-004	DP110	DP120	DP130+135	LP050	RP072	CP140
PP-20000-00	220U0	GP20M	RGP50M	RGP15G	RGP15G	10670390	3K3	1MI0
PP-20100-00	390U0	GP30M	BYT08PI-1000	S410D	MUR420	10643540	5K6	4MI7

8.5 : DC VOLTAGE TV ON

(9.2) : DC VOLTAGE TV Standby

ENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS
ENTACIÓN


BP005
CNT1_20V
H_DRIVE
+8V
PAN_SWITCH
+40V
DEGAUSS
GND
+5V
+8V_STBY
INF_POW_FAIL
PO
RESET
+5V_UP
CNT2_20V
BR003
REMOTE-PART RP.20000
SIGNAL-BOARD
BA010
AUDIO-PART AP.20000
BP130
-UA
GNDP
+UA
(DP)-CNT1_20V
(DP)-H_DRIVE
(DP)-PAN_SWITCH
AQR_ON
GNDS
DP115 1N4148
RP118 47R0 430MI0W
TP115 BC546B
RP115 10K0
RP116 1K0
DP230 1N4148
RP230 1K0
CP230 220N0
RP231 56K0
LP020
DP220 RGP10G
CP220 220U0 16V
CP226 100U0 25V
RP229 4K7
IP220 TDA8139
RP226 1K0
CP227 220N0
CP228 100U0 25V
RP228 1K0
RP227 2K26
BP110
CP049 1N5
CP050 150P0
DP110
CP110 220U0 200.0V
RP113 10K0 0W43
RP114 10K0 0W43
CP111 470P0
DP112 MUR1100E
CP112 1N5
RP112 1K2 2W0
LP112 95U0
DP113 MUR160
LP050
# JP912
# JP911
CP131 470P0
DP130
CP130 220U0 35.0V
RP130 10K0
CP136 470P0
DP135
CP135 220U0 35.0V
RP135 10K0
RP137 100R0
CP137 1N0
CP141 470P0
DP140 S410D
CP140 16.0V
BP120
CP121 470P0
DP120
CP120 330U0 35.0V
TP150 STP22NE03L
RP151 4K7
LP150
DP150 BYW29-150
CP150 1MI0 16.0V
TP152 BC546B
TP151 BC546B
DP152 BZX55B10
RP152 1K0
CP152 470U0 16V
CP151 10U0 63V
RP154 1K0
RP153 470R0
RP050 10M0
LP070
RP160 2K2
RP161 220R0 0W25
DP160 1N4148
TP160 BC546B
RP163 82K0
DP161 1N4148
TP161 BC546B
RP162 10K0
RP150 1K0
IP070 CET1103G
RP075 100R0
+UA
-UA
+8V_STBY
+5V_UP
USYS
+10V
+20V
+6V
(DP)-USYS
(DP)-+8V
(DP)-+20V
(RP) +5V_UP
(RP) RESET
PWM
REG
(DP)-PWM_PULSE
RP198 10K0
RP197 22K0
DP196 1N4148
DP197 1N4148
CP197 100N0
TP197 BC546B
RP196 10K0
RP192 1K0
CP158 10N0
DP194 1N4148
RP195 22K0
DP193 1N4148
RP194 10K0
RP193 4K7
RP182 1K0
CP159 100N0
RP159 22K0
RP190 47K0
RP191 100K0
CP190 47U0 16V
RP189 15K0
RP199 1K0
DP188 1N4148
CP188 47U0 16V
RP187 4K7
RP200 47K0
IP170 LM393
DP170 1N4148
RP186 100R0
RP184 1K2
TP184 BC546B
TP185 BC546B
RP185 2K2
RP223 10K0
TP221 BC546B
RP225 4K7
RP224 100R0
CP221 10N0
RP221 100R0
TP158 BC546B
RP158 10K0
RP157 100R0
DP158 1N4148
DP221 1N4148
RP090 0W25
RP180 5K0 0W4
CP180 100P0
DP183 1N4148
CP183 100U0 25V
TP179 BC556B
RP177 1K5
RP165 470R0 0W25
CP172 100N0
RP167 27K0
CP182 220N0
RP176 2K7
CP178 4N7
USYS ADJ.
RP180 1K0
RP179 1K25
RP181 100R0 0W25
CP170 100U0 25V
RP168 4K7
RP175 470R0
RP164 4K7
RP170 2K2
CP168 100N0
RP173 47R0
TP173 BC556B
RP171
RP169 4K7
CP171 10N0
RP172 22K0
RP174 10K0
RP166 100K0
Connecting safety PSB / SSB

Tube	USYS	Jumper	Deflection
4/3-MP	134V	JP912	DP20100.34
4/3-SF	137V	JP912	DP20101.37
4/3-XF	137V	JP912	DP20102.37
16/9-SF	137V	JP912	DP20110.37
16/9-XF	137V	JP912	DP20112.37

# = Value see DP 2... partlists

IP170 LM393

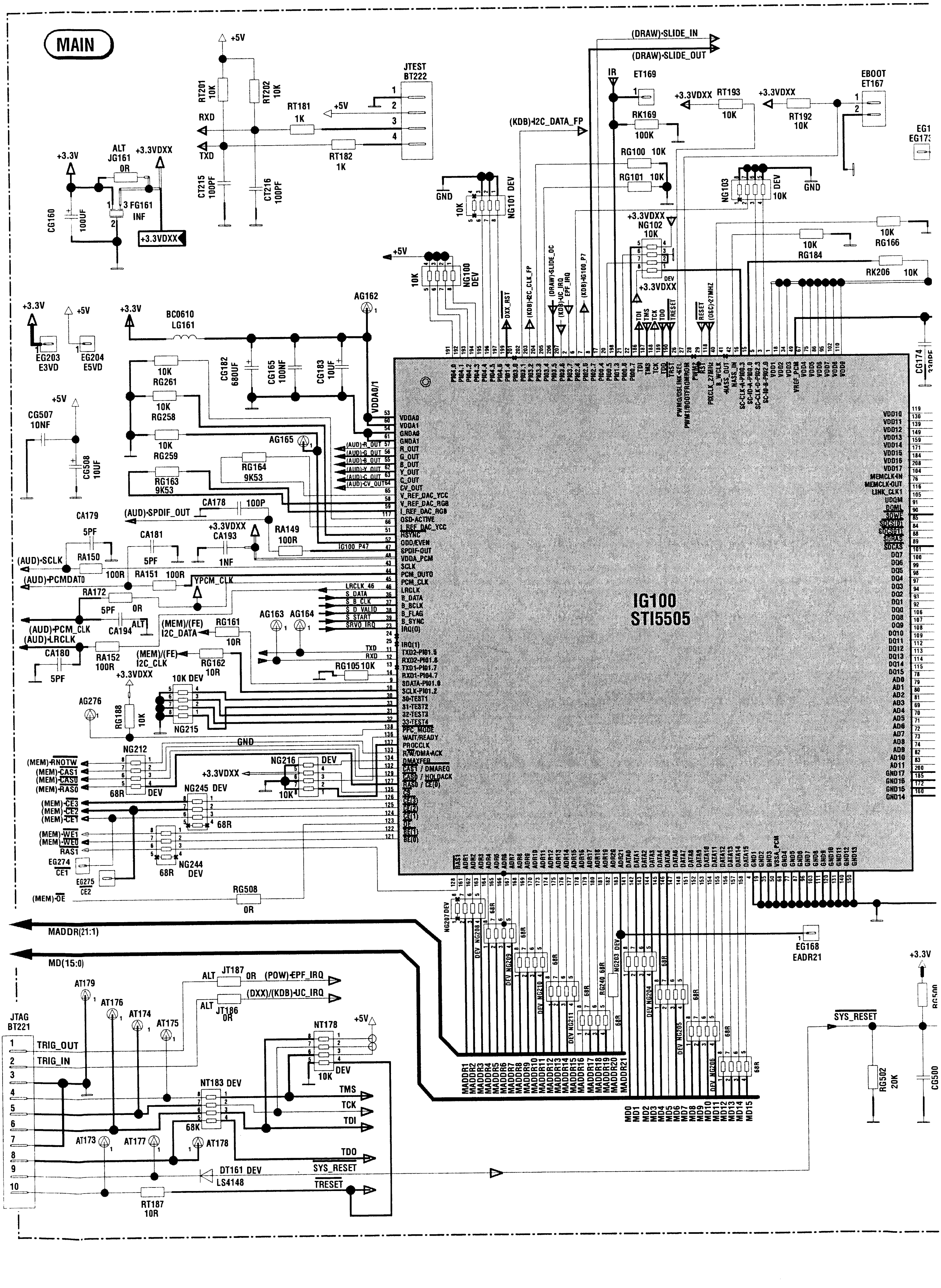
Safety-Part When-repairing,-use-original-part-only	Sicherheitsbauteil Bei-Ersatz-nur-Originalteil-verwenden	Utilice-solo-piezas-originales Pieza-de-seguridad
Piece-de-securite N'utilisez-que-les-pieces-d'origine	Componenti-di-sicurezza Per-la-riparazione-utilizzare-solo-componenti-originali	

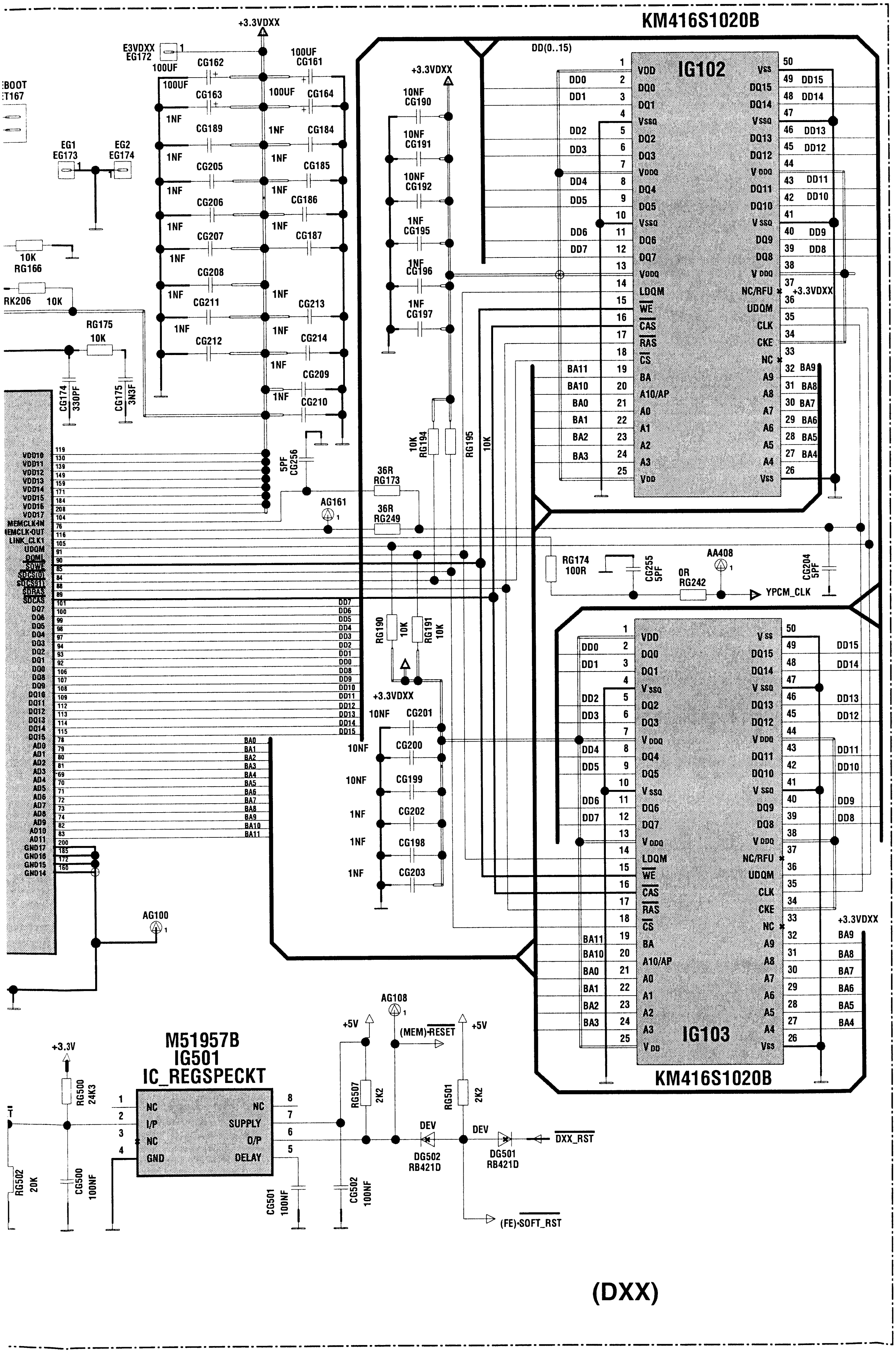
(PP)-POWER-SUPPLY

PSB PP-20000-00
PP-20100-00

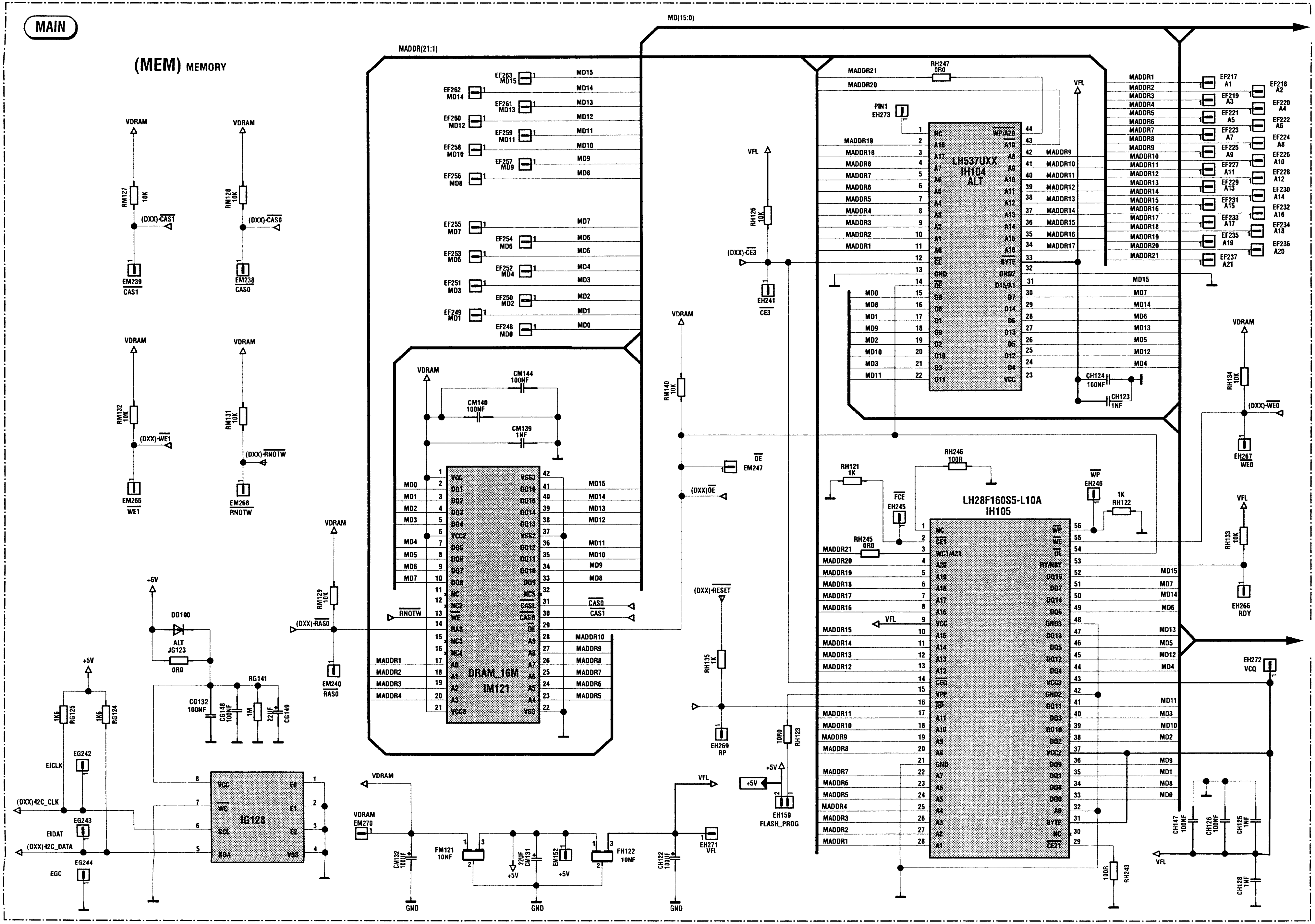
andby

MAIN•SCHEMATIC•DIAGRAM-•SCHEMA•DE•LA•PLATINE•PRINCIPALE-•SCHALTBILD•HAUPTPLATINE•

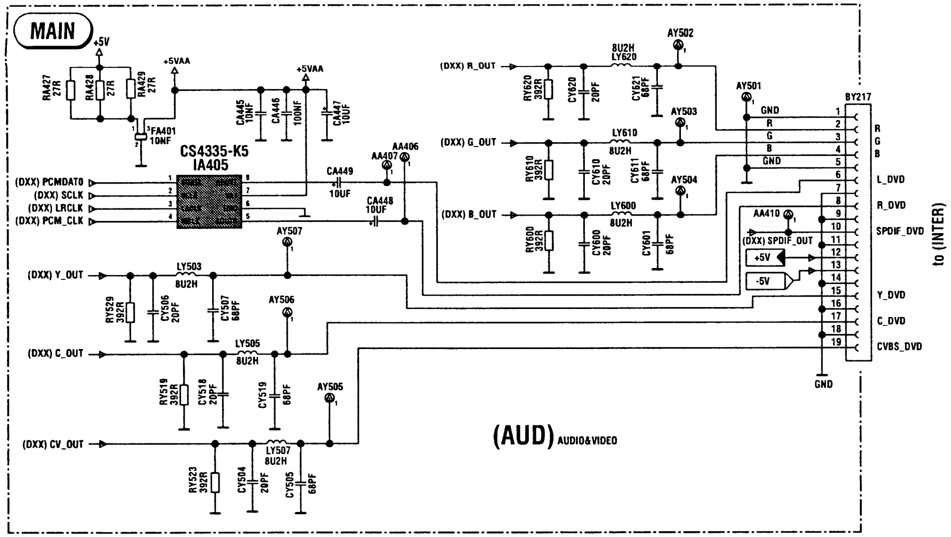

MAIN
+5V
RT201 10K
RT202 10K
RXD
TXD
RT181 1K
RT182 1K
CT215 100PF
CT216 100PF
JTEST BT222
+3.3V
ALT JG161 0R
+3.3VDXX
FG161 INF
CG160 100UF
(DRAW)•SLIDE_IN
(DRAW)•SLIDE_OUT
IR
ET169
RK169 100K
RT193 10K
RT192 10K
EBOOT ET167
(KDB)•I2C_DATA_FP
RG100 10K
RG101 10K
NG101 DEV
NG102 10K
NG103 DEV 10K
GND
RG184 10K
RG166 10K
RK206 10K
NG100 DEV
AG162
EG203 E3VD
EG204 E5VD
BC0610 LG161
CG182 680UF
CG165 100NF
CG183 10UF
VDDA0/1
RG261 10K
RG258 10K
RG259 10K
CG507 10NF
CG508 10UF
AG165
RG164 9K53
RG163 9K53
CA179 5PF
(AUD)•SPDIF_OUT
CA178 100P
CA181 5PF
CA193 1NF
RA149 100R
(AUD)•SCLK
RA150 100R
(AUD)•PCMDAT0
RA151 100R
YPCM_CLK
RA172 0R
CA194 5PF
ALT
(AUD)•PCM_CLK
(AUD)•LRCLK
(MEM)/(FE) I2C_DATA
RG161 10R
(MEM)/(FE) I2C_CLK
RG162 10R
CA180 5PF
RA152 100R
AG163
AG164
RG105 10K
AG276
RG188 10K
NG215 10K DEV
NG212 68R DEV
NG216 DEV 10K
NG245 DEV 68R
NG244 68R DEV
(MEM)•RNOTW
(MEM)•CAS1
(MEM)•CAS0
(MEM)•RAS0
(MEM)•CE3
(MEM)•CE2
(MEM)•CE1
(MEM)•WE1
(MEM)•WE0
RAS1
EG274 CE1
EG275 CE2
(MEM)•OE
RG508 0R
IG100 STI5505
CG174
MADDR(21:1)
MD(15:0)
EG168 EADR21
NG207 DEV
NG208 68R
NG209 68R
NG210 68R
NG211 68R
RG240 68R
NG203 DEV
NG204 68R
NG205 68R
NG206 68R
MADDR1 … MADDR21
MD0 … MD15
JTAG BT221
TRIG_OUT
TRIG_IN
AT179
AT176
AT174
AT175
ALT JT187 0R (POW)•EPF_IRQ
ALT JT186 0R (DXX)/(KDB)•UC_IRQ
NT178 DEV 10K
NT183 DEV 68K
TMS
TCK
TDI
TDO
SYS_RESET
TRESET
AT173
AT177
AT178
DT161 DEV LS4148
RT187 10R
RG502 20K
CG500
+3.3V

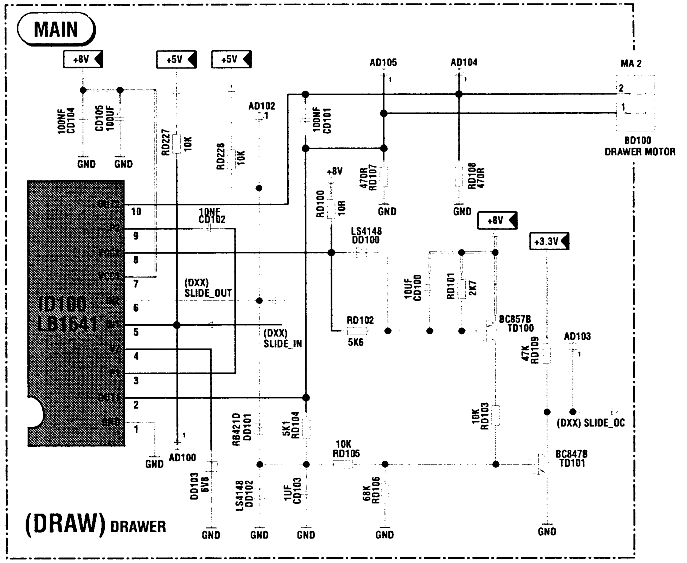

KM416S1020B
IG102
KM416S1020B
IG103
DD(0..15)
+3.3VDXX
E3VDXX
EG172
100UF
CG162
CG161
CG163
CG164
1NF
CG189
CG184
CG205
CG185
CG206
CG186
CG207
CG187
CG208
CG211
CG213
CG212
CG214
CG209
CG210
5PF
CG256
10NF
CG190
CG191
CG192
CG195
CG196
CG197
EBOOT
ET167
EG1
EG173
EG2
EG174
10K
RG166
RK206
RG175
CG174
330PF
CG175
3N3F
RG194
RG195
36R
RG173
RG249
AG161
RG174
100R
CG255
5PF
AA408
0R
RG242
YPCM_CLK
CG204
RG190
RG191
CG201
CG200
CG199
CG202
CG198
CG203
AG100
VDD10
VDD11
VDD12
VDD13
VDD14
VDD15
VDD16
VDD17
MEMCLK-IN
MEMCLK-OUT
LINK_CLK1
UDQM
LDQM
SDWE
SDCS(0)
SDCS(1)
SDRAS
SDCAS
DQ0
DQ1
DQ2
DQ3
DQ4
DQ5
DQ6
DQ7
DQ8
DQ9
DQ10
DQ11
DQ12
DQ13
DQ14
DQ15
AD0
AD1
AD2
AD3
AD4
AD5
AD6
AD7
AD8
AD9
AD10
AD11
GND17
GND16
GND15
GND14
DD0
DD1
DD2
DD3
DD4
DD5
DD6
DD7
DD8
DD9
DD10
DD11
DD12
DD13
DD14
DD15
BA0
BA1
BA2
BA3
BA4
BA5
BA6
BA7
BA8
BA9
BA10
BA11
VDD
DQ0
DQ1
VSSQ
VDDQ
LDQM
WE
CAS
RAS
CS
BA
A10/AP
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
VSS
NC/RFU
UDQM
CLK
CKE
NC
M51957B
IG501
IC_REGSPECKT
NC
I/P
GND
SUPPLY
O/P
DELAY
+3.3V
RG500
24K3
RG502
20K
CG500
100NF
CG501
100NF
CG502
100NF
+5V
AG108
(MEM)•RESET
RG507
2K2
RG501
2K2
DEV
DG502
RB421D
DG501
RB421D
DXX_RST
(FE)•SOFT_RST
(DXX)

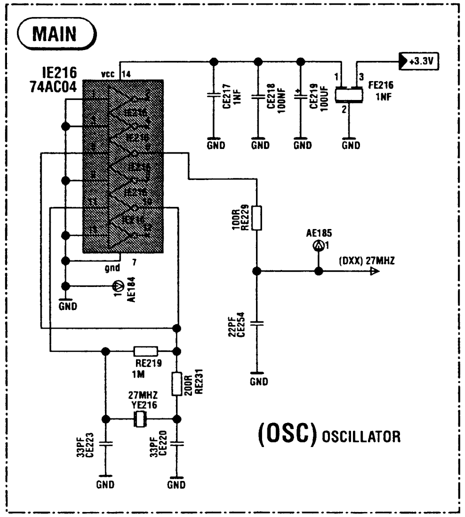
MAIN SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE PRINCIPALE - SCHALTBILD HAUPTPLATINE - SCHEMA DELLA PIASTRA PRINCIPALE - ESQUEMA DE LA PLATINA PRINCIPAL

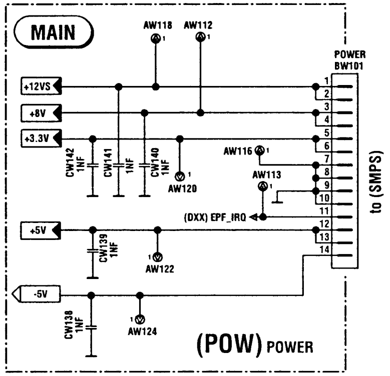

MAIN
(MEM) MEMORY
MADDR(21:1)
MD(15:0)
VDRAM
RM127 10K
(DXX)-CAS1
EM239 CAS1
RM128 10K
(DXX)-CAS0
EM238 CAS0
RM132 10K
(DXX)-WE1
EM265 WE1
RM131 10K
(DXX)-RNOTW
EM268 RNOTW
RM129 10K
(DXX)-RAS0
EM240 RAS0
EF263 MD15
EF262 MD14
EF261 MD13
EF260 MD12
EF259 MD11
EF258 MD10
EF257 MD9
EF256 MD8
EF255 MD7
EF254 MD6
EF253 MD5
EF252 MD4
EF251 MD3
EF250 MD2
EF249 MD1
EF248 MD0
CM144 100NF
CM140 100NF
CM139 1NF
DRAM_16M
IM121
VCC
DQ1
DQ2
DQ3
DQ4
VCC2
DQ5
DQ6
DQ7
DQ8
NC
NC2
WE
RAS
NC3
NC4
A0
A1
A2
A3
VCC3
VSS3
DQ16
DQ15
DQ14
DQ13
VSS2
DQ12
DQ11
DQ10
DQ9
NC5
CASL
CASH
OE
A9
A8
A7
A6
A5
A4
VSS
RNOTW
CAS0
CAS1
+5V
DG100
ALT JG123 0R0
CG132 100NF
CG148 100NF
RG141 1M
CG149 22UF
+5V
RG125 1K6
RG124 1K6
EICLK
EG242
(DXX)-I2C_CLK
EG243
EIDAT
(DXX)-I2C_DATA
EG244
EGC
IG128
VCC
WC
SCL
SDA
E0
E1
E2
VSS
VDRAM
VDRAM EM270
CM132 100UF
FM121 10NF
22UF CM131
+5V
EM152
+5V
FH122 10NF
VFL
CH122 100UF
EH271 VFL
GND
VDRAM
RH140 10K
OE EM247
(DXX)-OE
(DXX)-RESET
RH135 1K
EH269 RP
VFL
RH126 10K
(DXX)-CE3
EH241 CE3
PIN1 EH273
RH247 0R0
MADDR21
MADDR20
LH537UXX
IH104
ALT
NC
A18
A17
A7
A6
A5
A4
A3
A2
A1
A0
CE
GND
OE
D0
D8
D1
D9
D2
D10
D3
D11
WP/A20
A19
A8
A9
A10
A11
A12
A13
A14
A15
A16
BYTE
GND2
D15/A1
D7
D14
D6
D13
D5
D12
D4
VCC
VFL
CH124 100NF
CH123 1NF
EF217 A1
EF218 A2
EF219 A3
EF220 A4
EF221 A5
EF222 A6
EF223 A7
EF224 A8
EF225 A9
EF226 A10
EF227 A11
EF228 A12
EF229 A13
EF230 A14
EF231 A15
EF232 A16
EF233 A17
EF234 A18
EF235 A19
EF236 A20
EF237 A21
VDRAM
RH134 10K
(DXX)-WE0
EH267 WE0
RH246 100R
RH121 1K
FCE EH245
RH245 0R0
WP EH246
1K RH122
LH28F160S5-L10A
IH105
NC
CE1
WC1/A21
A20
A19
A18
A17
A16
VCC
A15
A14
A13
A12
CE0
VPP
RP
A11
A10
A9
A8
GND
A7
A6
A5
A4
A3
A2
A1
WP
WE
OE
RY/NBY
DQ15
DQ7
DQ14
DQ6
GND3
DQ13
DQ5
DQ12
DQ4
VCC3
GND2
DQ11
DQ3
DQ10
DQ2
VCC2
DQ9
DQ1
DQ8
DQ0
A0
BYTE
NC
CE2
VFL
RH133 10K
EH266 RDY
EH272 VCQ
10R0 RH123
+5V
EH159 FLASH_PROG
100R RH243
CH147 100NF
CH126 100NF
CH125 1NF
CH128 1NF
VFL

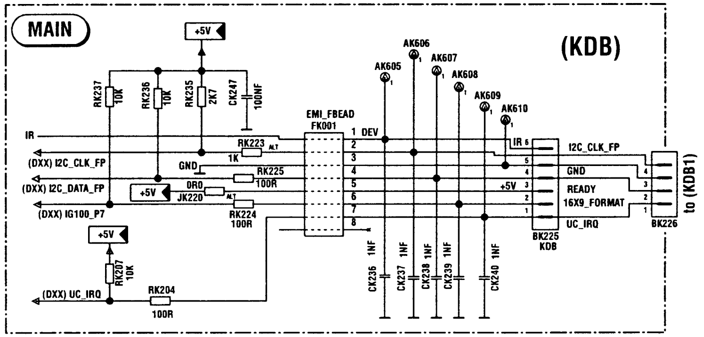
MAIN SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE PRINCIPALE - SCHALTBILD HAUPTPLATINE - SCHEMA DELLA PIASTRA PRINCIPALE- ESQUEMA DE LA PLATINA PRINCIPAL


MAIN
CS4335-K5
IA405
(DXX) PCMDAT0
(DXX) SCLK
(DXX) LRCLK
(DXX) PCM_CLK
(DXX) Y_OUT
(DXX) C_OUT
(DXX) CV_OUT
(DXX) R_OUT
(DXX) G_OUT
(DXX) B_OUT
(DXX) SPDIF_OUT
BY217
GND
R
G
B
L_DVD
R_DVD
SPDIF_DVD
Y_DVD
C_DVD
CVBS_DVD
+5V
-5V
to (INTER)
(AUD) AUDIO&VIDEO

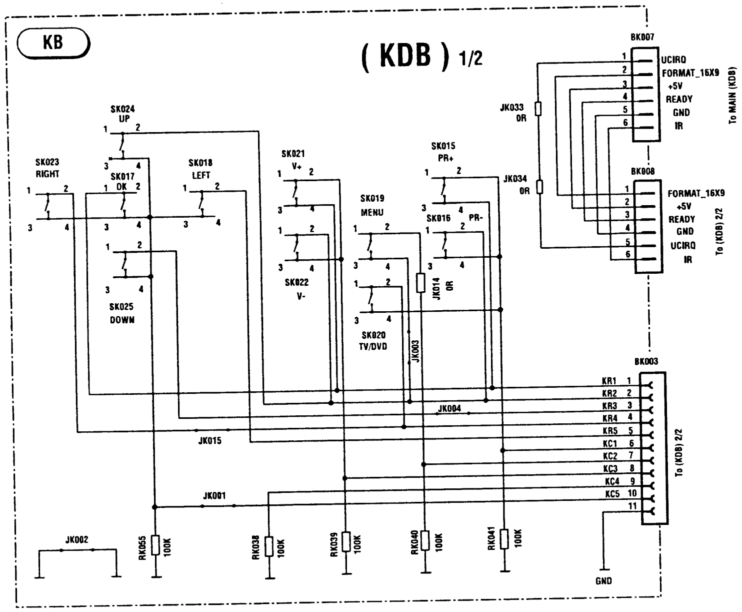

MAIN
+8V
+5V
ID100
LB1641
(DXX) SLIDE_OUT
(DXX) SLIDE_IN
(DXX) SLIDE_OC
BD100
DRAWER MOTOR
MA 2
BC857B
TD100
BC847B
TD101
+3.3V
GND
(DRAW) DRAWER

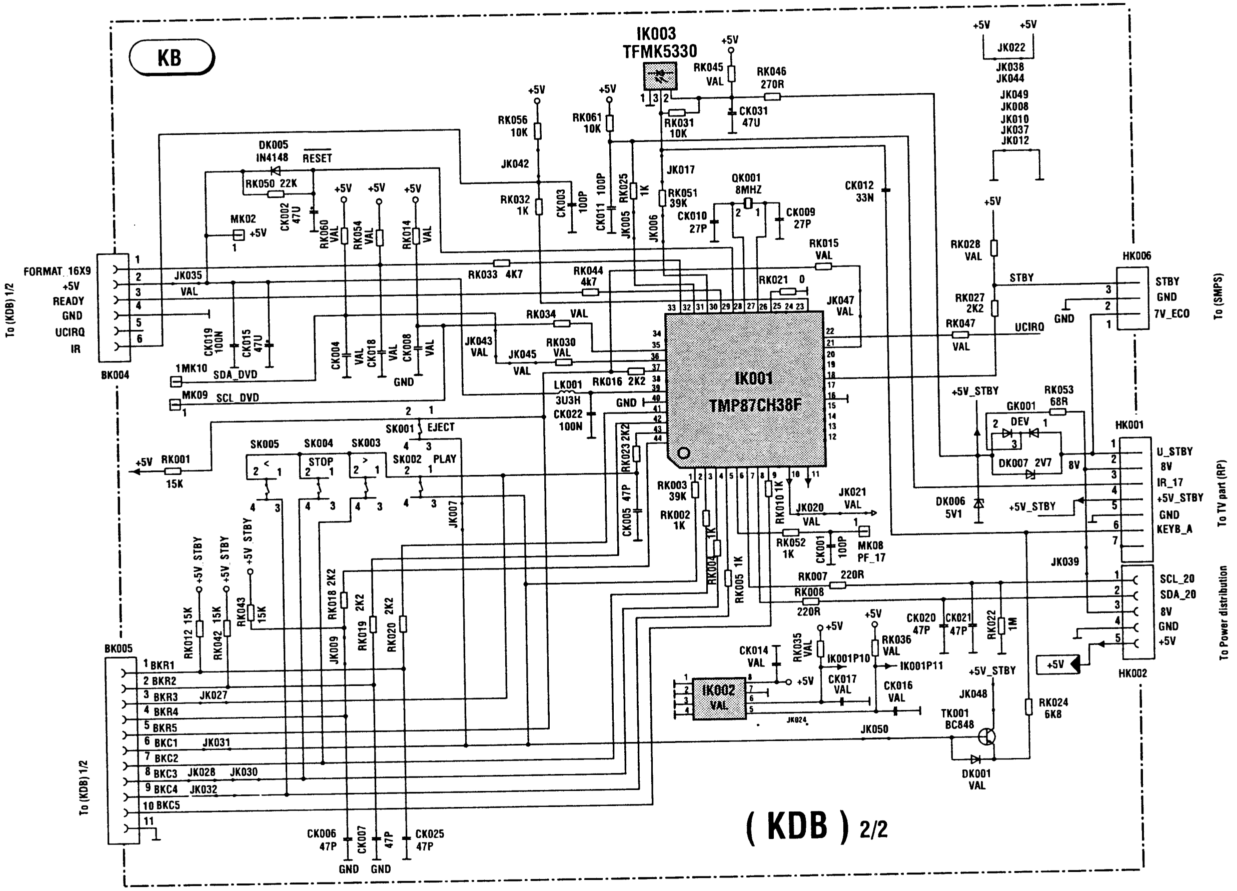

MAIN
IE216
74AC04
+3.3V
FE216
1NF
(DXX) 27MHZ
AE185
RE219
1M
27MHZ
YE216
GND
(OSC) OSCILLATOR


MAIN
+12VS
+8V
+3.3V
+5V
-5V
POWER
BW101
(DXX) EPF_IRQ
to (SMPS)
(POW) POWER

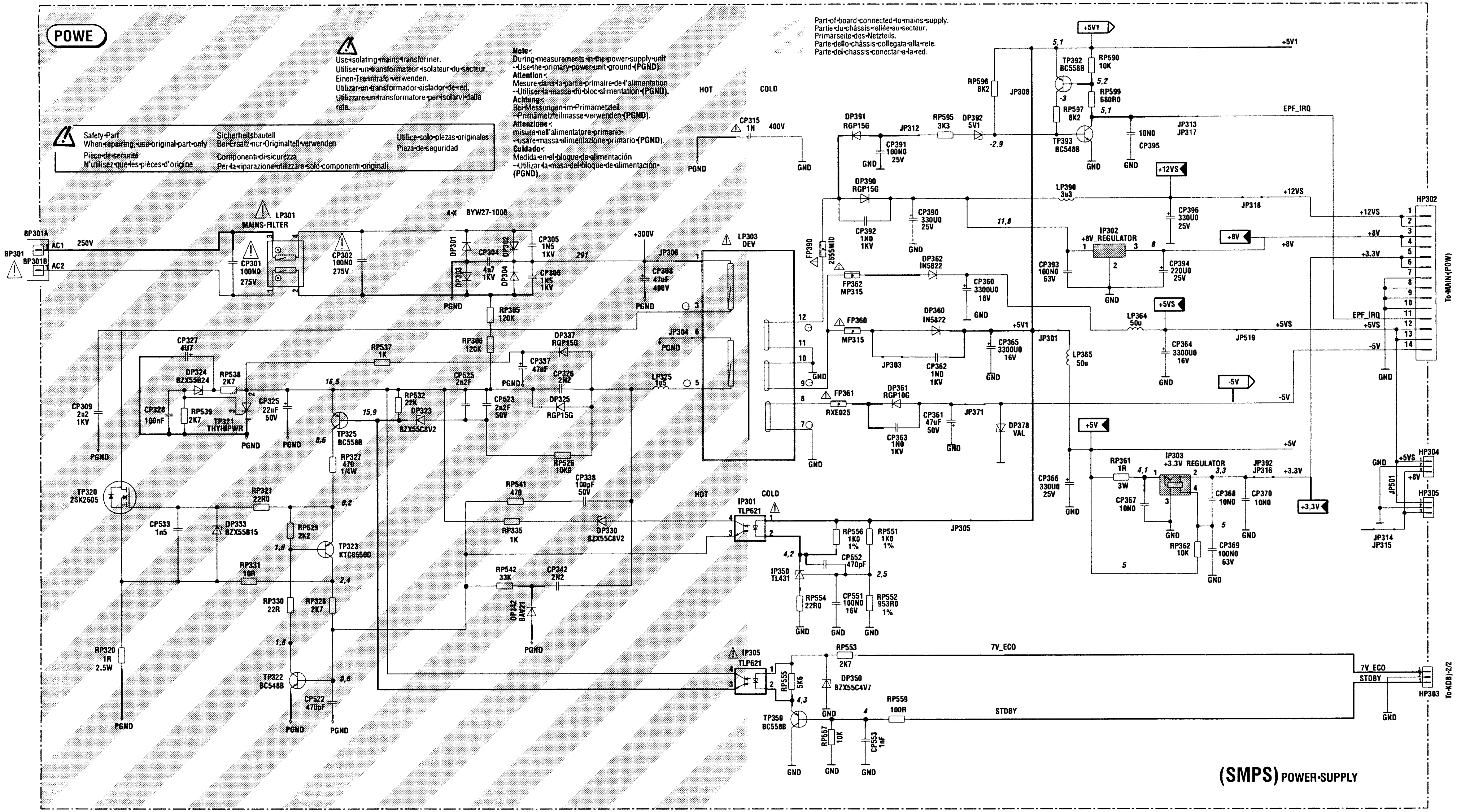

MAIN
(KDB)
+5V
IR
(DXX) I2C_CLK_FP
(DXX) I2C_DATA_FP
(DXX) IG100_P7
(DXX) UC_IRQ
EMI_FBEAD
FK001
I2C_CLK_FP
GND
READY
16X9_FORMAT
UC_IRQ
BK225
KDB
BK226
to (KDB1)

KEYBOARD SCHEMATIC DIAGRAM - SCHEMA DES CIRCUITS COMMANDES - SCHALTBILD BEDIENTEIL - SCHEMA DEI CIRCUITI TASTIERA - ESQUEMA DE LOS CIRCUITOS MANDOS


KB
(KDB) 1/2
BK007
UCIRQ
FORMAT_16X9
+5V
READY
GND
IR
To MAIN (KDB)
BK008
FORMAT_16X9
+5V
READY
GND
UCIRQ
IR
To (KDB) 2/2
JK033 0R
JK034 0R
SK024 UP
SK023 RIGHT
SK017 OK
SK018 LEFT
SK025 DOWN
SK021 V+
SK022 V-
SK019 MENU
SK020 TV/DVD
SK015 PR+
SK016 PR-
JK014 0R
JK003
JK004
JK015
JK001
JK002
BK003
KR1 KR2 KR3 KR4 KR5 KC1 KC2 KC3 KC4 KC5
RK055 100K
RK038 100K
RK039 100K
RK040 100K
RK041 100K
GND


KB
(KDB) 2/2
IK003 TFMK5330
IK001 TMP87CH38F
IK002 VAL
QK001 8MHZ
RK045 VAL
RK046 270R
RK031 10K
CK031 47U
RK056 10K
RK061 10K
RK032 1K
CK003 100P
CK011 100P
RK025 1K
JK042
JK017
RK051 39K
CK010 27P
CK009 27P
CK012 33N
DK005 IN4148
RESET
RK050 22K
CK002 47U
RK060 VAL
RK054 VAL
RK014 VAL
MK02
FORMAT_16X9
+5V
READY
GND
UCIRQ
IR
To (KDB) 1/2
BK004
JK035
VAL
RK033 4K7
RK044 4K7
RK015 VAL
RK021 0
JK047 VAL
CK019 100N
CK015 47U
1MK10 SDA_DVD
MK09 SCL_DVD
CK004 VAL
CK018 VAL
CK008 VAL
GND
JK043 VAL
JK045 VAL
RK034 VAL
RK030 VAL
LK001 3U3H
CK022 100N
RK016 2K2
GND
SK001 EJECT
SK005 <
SK004 STOP
SK003 >
SK002 PLAY
JK007
RK023 2K2
CK005 47P
RK003 39K
RK002 1K
RK004 1K
RK005 1K
RK010 1K
JK020 VAL
JK021 VAL
RK052 1K
CK001 100P
MK08 PF_17
RK007 220R
RK008 220R
+5V RK001 15K
+5V STBY
RK012 15K
RK042 15K
RK043 15K
RK018 2K2
RK019 2K2
RK020 2K2
JK009
BK005
BKR1 BKR2 BKR3 BKR4 BKR5 BKC1 BKC2 BKC3 BKC4 BKC5
JK027 JK031 JK028 JK030 JK032
CK006 47P
CK007 47P
CK025 47P
GND GND
To (KDB) 1/2
CK014 VAL
RK035 VAL
IK001P10
RK036 VAL
IK001P11
CK017 VAL
CK016 VAL
CK020 47P
CK021 47P
RK022 1M
JK024
JK050
JK048
TK001 BC848
DK001 VAL
RK024 6K8
+5V_STBY
JK022
JK038 JK044 JK049 JK008 JK010 JK037 JK012
RK028 VAL
RK027 2K2
RK047 VAL
STBY
UCIRQ
GND
HK006
STBY GND 7V_ECO
To (SMPS)
GK001 DEV
RK053 68R
DK007 2V7
8V
DK006 5V1
HK001
U_STBY 8V IR_17 +5V_STBY GND KEYB_A
To TV part (RP)
JK039
HK002
SCL_20 SDA_20 8V GND +5V
To Power distribution

POWER SUPPLY SCHEMATIC DIADIAGRAM SCHEMA DES CIRCUITS D'ALIMENTATIONS - SCHALTBILD NETZTEIL - SCHEMA DEI CIRCUITI DI ALIMENTAZIONE - ESQUEMA DE LOS CIRCUITOS DE ALIMENTACIÓN



Use isolating mains transformer.
Utiliser un transformateur isolateur du secteur.
Einen Trenntrafo verwenden.
Utilizar un transformador aislador de red.
Utilizzare un transformatore per isolarvi dalla rete.

Safety Part When repairing, use original part only	Sicherheitsbauteil Bei Ersatz nur Originalteil verwenden	Utilice solo piezas originales Pieza de seguridad
Pièce de securité N'utilisez que les pièces d'origine	Componenti di sicurezza Per la riparazione utilizzare solo componenti originali	

Note :
During measurements in the power supply unit
- Use the primary power unit ground (PGND).

Attention :
Mesure dans la partie primaire de l'alimentation
- Utiliser la masse du bloc alimentation (PGND).

Achtung :
Bei Messungen im Primärnetzteil
- Primärnetzteilmasse verwenden (PGND).

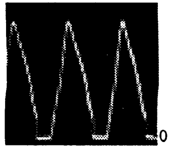
Attenzione :
misure nell'alimentatore primario
- usare massa alimentazione primario (PGND).

Cuidado :
Medida en el bloque de alimentación
- Utilizar la masa del bloque de alimentación (PGND).

Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chassis conectar a la red.

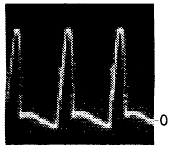
POWE
HOT
COLD
CP315 1N 400V
PGND
GND
LP301 MAINS-FILTER
4 X BYW27-1000
BP301A AC1
BP301
BP301B AC2
250V
CP301 100N0 275V
CP302 100N0 275V
DP301
DP302
DP303
DP304
CP304 4n7 1KV
CP305 1N5 1KV
CP306 1N5 1KV
291
+300V
JP306
CP308 47uF 400V
LP303 DEV
JP304
LP325 1u5
RP305 120K
RP306 120K
CP327 4U7
DP324 BZX55B24
RP538 2K7
CP328 100nF
RP539 2K7
TP321 THYHIPWR
CP325 22uF 50V
RP537 1K
16,5
CP525 2n2F
CP523 2n2F 50V
DP337 RGP15G
CP337 47uF
CP326 2N2
DP325 RGP15G
RP526 10K0
RP532 22K
DP323 BZX55C8V2
TP325 BC558B
15,9
8,6
RP327 470 1/4W
CP309 2n2 1KV
TP320 2SK2605
RP321 22R0
8,2
CP533 1n5
DP333 BZX55B15
RP529 2K2
1,8
TP323 KTC8550D
RP331 10R
2,4
RP330 22R
RP328 2K7
RP541 470
CP338 100pF 50V
RP335 1K
DP330 BZX55C8V2
RP542 33K
CP342 2N2
DP342 BAV21
RP320 1R 2.5W
1,8
TP322 BC548B
0,6
CP522 470pF
IP301 TLP621
IP305 TLP621
RP556 1K0 1%
RP551 1K0 1%
4,2
CP552 470pF
IP350 TL431
2,5
RP554 22R0
CP551 100N0 16V
RP552 953R0 1%
JP305
RP553 2K7
7V_ECO
RP555 5K6
DP350 BZX55C4V7
4,3
TP350 BC558B
RP559 100R
STDBY
4
RP557 10K
CP553 1nF
FP390 2555MID
DP391 RGP15G
JP312
CP391 100N0 25V
RP595 3K3
DP392 5V1
-2,9
RP596 8K2
JP308
5,1
+5V1
TP392 BC558B
RP590 10K
5,2
-3
RP599 680R0
RP597 8K2
TP393 BC548B
10N0 CP395
JP313 JP317
EPF_IRQ
DP390 RGP15G
CP390 330U0 25V
CP392 1N0 1KV
11,8
LP390 3u3
+12VS
CP396 330U0 25V
JP318
IP302 +8V_REGULATOR
CP393 100N0 63V
CP394 220U0 25V
+8V
FP362 MP315
DP362 1N5822
CP360 3300U0 16V
FP360 MP315
DP360 1N5822
CP365 3300U0 16V
JP301
JP303
CP362 1N0 1KV
LP364 50u
+5VS
CP364 3300U0 16V
JP519
LP365 50u
-5V
FP361 RXE025
DP361 RGP10G
CP361 47uF 50V
JP371
DP378 VAL
CP363 1N0 1KV
+5V
RP361 1R 3W
4,1
IP303 +3.3V_REGULATOR
3,3
JP302 JP316
+3.3V
CP367 10N0
CP368 10N0
CP370 10N0
RP362 10K
CP369 100N0 63V
CP366 330U0 25V
HP302
To MAIN (POW)
HP304
HP305
JP501
JP314 JP315
HP303
To KDB) 2/2
(SMPS) POWER SUPPLY

TP320 (Drain)



T=15μs 680Vpp

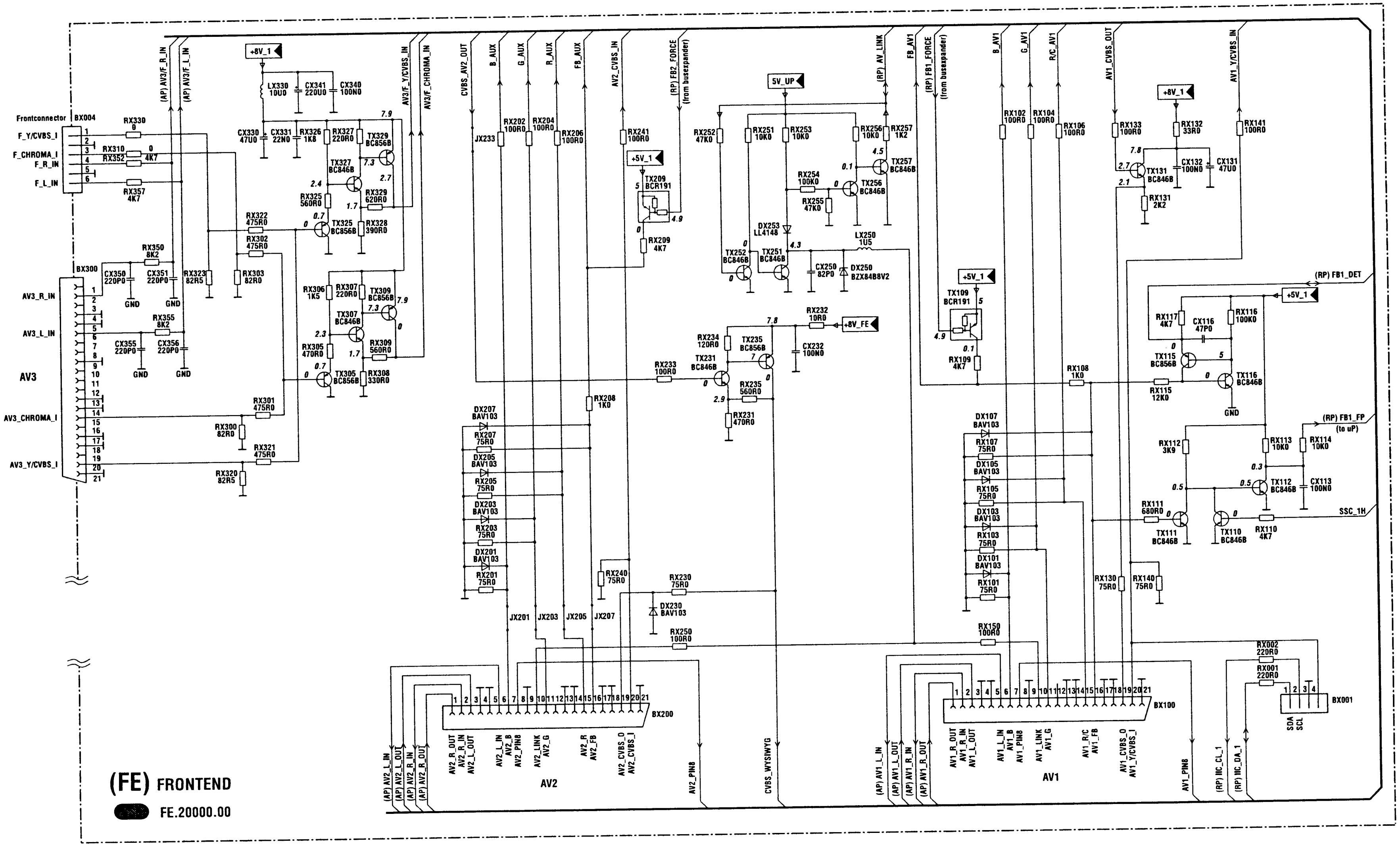
TP320 (Gate)



T=15μs 12Vpp

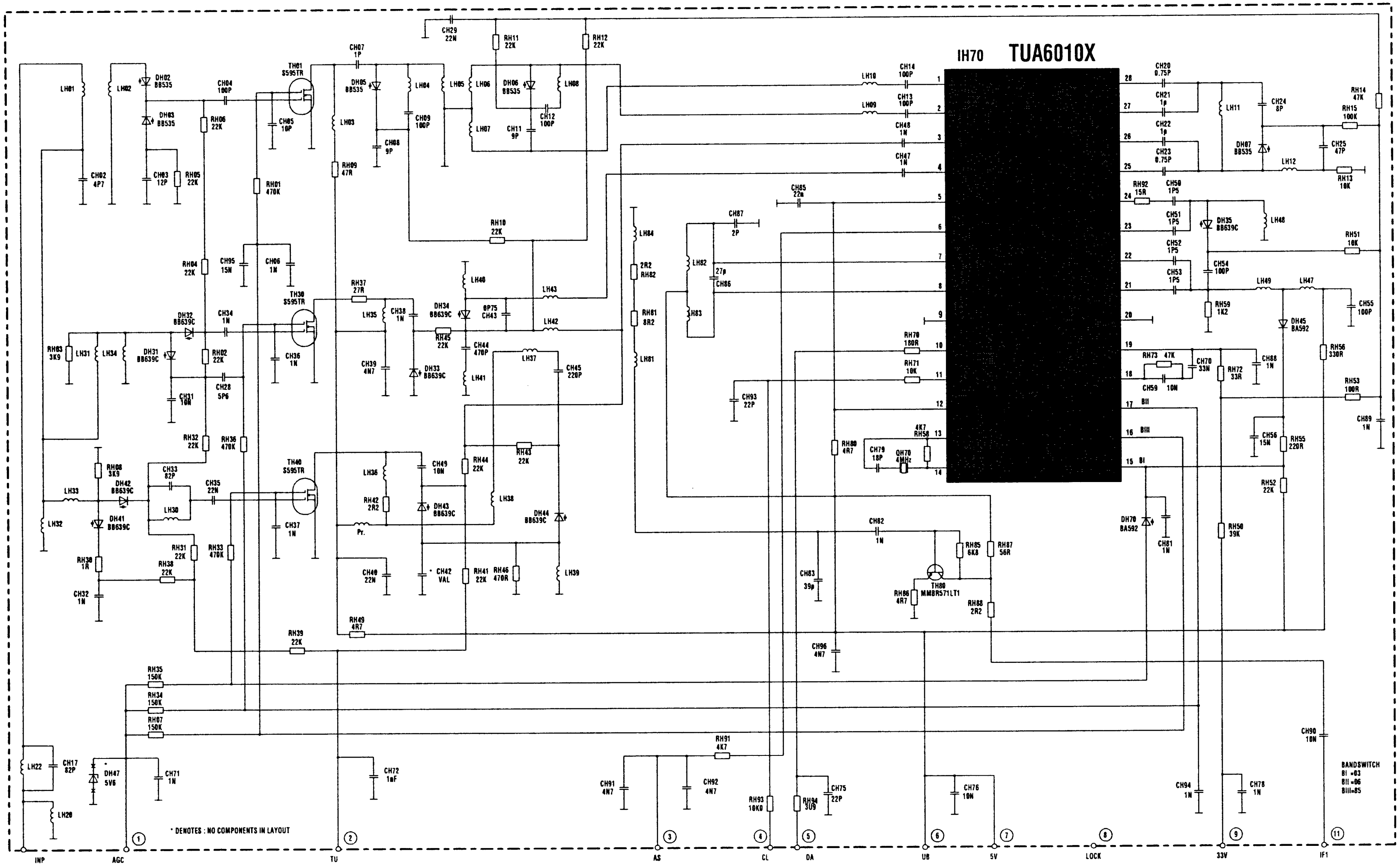
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
FRONTEND PART (2) - EINGANGSSTUFEN (2) - PRESE FRONTALI (2) - FRONT END PART (2)

SCART INTERFACE - INTERFACE PERITELEVISION - SCART INTERFACE - PRESA PERITEL- EUROCONECTOR

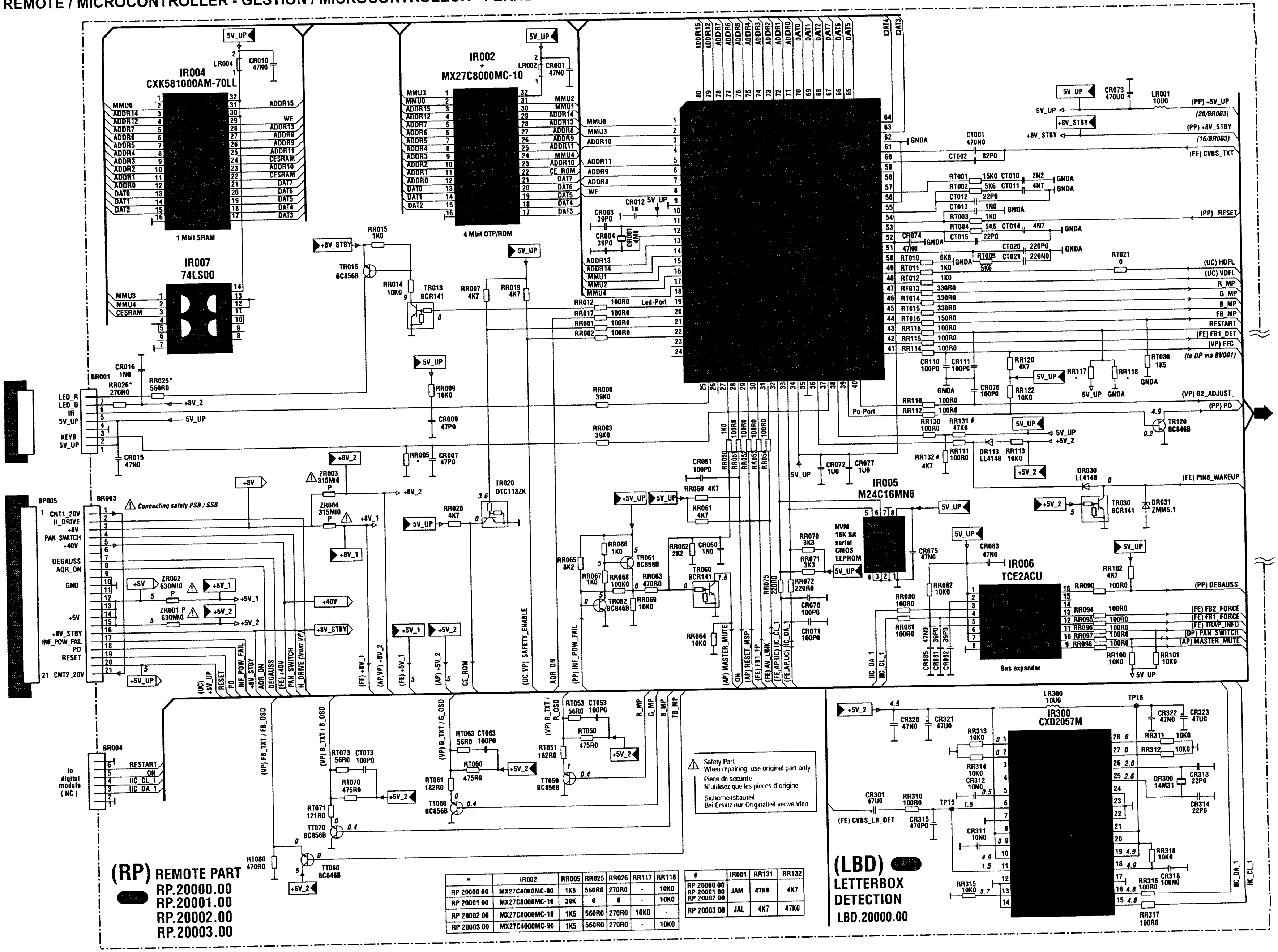


Frontconnector
BX004
F_Y/CVBS_I
F_CHROMA_I
F_R_IN
F_L_IN
RX330 0
RX310 0
RX352 4K7
RX357 4K7
(AP) AV3/F_R_IN
(AP) AV3/F_L_IN
+8V_1
LX330 10U0
CX341 220U0
CX340 100N0
CX330 47U0
CX331 22N0
RX326 1K8
RX327 220R0
TX329 BC856B
TX327 BC846B
RX325 560R0
RX329 620R0
RX322 475R0
RX302 475R0
TX325 BC856B
RX328 390R0
AV3/F_Y/CVBS_IN
AV3/F_CHROMA_IN
BX300
RX350 8K2
CX350 220P0
CX351 220P0
RX323 82R5
RX303 82R0
GND
AV3_R_IN
AV3_L_IN
RX355 8K2
CX355 220P0
CX356 220P0
AV3
AV3_CHROMA_I
AV3_Y/CVBS_I
RX301 475R0
RX300 82R0
RX321 475R0
RX320 82R5
RX306 1K5
RX307 220R0
TX309 BC856B
TX307 BC846B
RX305 470R0
RX309 560R0
TX305 BC856B
RX308 330R0
CVBS_AV2_OUT
B_AUX
G_AUX
R_AUX
FB_AUX
AV2_CVBS_IN
(RP) FB2_FORCE (from busexpander)
JX233
RX202 100R0
RX204 100R0
RX206 100R0
RX241 100R0
+5V_1
TX209 BCR191
RX209 4K7
DX207 BAV103
RX207 75R0
DX205 BAV103
RX205 75R0
DX203 BAV103
RX203 75R0
DX201 BAV103
RX201 75R0
RX208 1K0
RX240 75R0
RX230 75R0
DX230 BAV103
RX250 100R0
JX201
JX203
JX205
JX207
5V_UP
RX252 47K0
RX251 10K0
RX253 10K0
RX256 10K0
RX257 1K2
TX257 BC846B
RX254 100K0
TX256 BC846B
RX255 47K0
DX253 LL4148
LX250 1U5
TX252 BC846B
TX251 BC846B
CX250 82P0
DX250 BZX84B8V2
(RP) AV_LINK
FB_AV1
(RP) FB1_FORCE (from busexpander)
RX232 10R0
+8V_FE
RX234 120R0
TX235 BC856B
CX232 100N0
RX233 100R0
TX231 BC846B
RX235 560R0
RX231 470R0
+5V_1
TX109 BCR191
RX109 4K7
B_AV1
G_AV1
R/C_AV1
AV1_CVBS_OUT
AV1_Y/CVBS_IN
RX102 100R0
RX104 100R0
RX106 100R0
RX133 100R0
+8V_1
RX132 33R0
RX141 100R0
TX131 BC846B
CX132 100N0
CX131 47U0
RX131 2K2
(RP) FB1_DET
+5V_1
RX117 4K7
CX116 47P0
RX116 100K0
TX115 BC856B
TX116 BC846B
RX108 1K0
RX115 12K0
GND
(RP) FB1_FP (to uP)
DX107 BAV103
RX107 75R0
DX105 BAV103
RX105 75R0
DX103 BAV103
RX103 75R0
DX101 BAV103
RX101 75R0
RX112 3K9
RX113 10K0
RX114 10K0
TX112 BC846B
CX113 100N0
RX111 680R0
TX111 BC846B
TX110 BC846B
RX110 4K7
SSC_1H
RX130 75R0
RX140 75R0
RX150 100R0
RX002 220R0
RX001 220R0
BX001
SDA
SCL
BX200
BX100
(AP) AV2_L_IN
(AP) AV2_L_OUT
(AP) AV2_R_IN
(AP) AV2_R_OUT
AV2_R_OUT
AV2_R_IN
AV2_L_OUT
AV2_L_IN
AV2_B
AV2_PIN8
AV2_LINK
AV2_G
AV2_R
AV2_FB
AV2_CVBS_O
AV2_CVBS_I
AV2
AV2_PIN8
CVBS_WYSIWYG
(AP) AV1_L_IN
(AP) AV1_L_OUT
(AP) AV1_R_IN
(AP) AV1_R_OUT
AV1_R_OUT
AV1_R_IN
AV1_L_OUT
AV1_L_IN
AV1_B
AV1_PIN8
AV1_LINK
AV1_G
AV1_R/C
AV1_FB
AV1_CVBS_O
AV1_Y/CVBS_I
AV1
AV1_PIN8
(RP) IIC_CL_1
(RP) IIC_DA_1
(FE) FRONTEND
FE.20000.00

VHF / UHF TUNER CTT5010 (For information only)


IH70
TUA6010X
TH01 S595TR
TH30 S595TR
TH40 S595TR
TH80 MMBR571LT1
QH70 4MHz
DH02 BB535
DH03 BB535
DH05 BB535
DH06 BB535
DH07 BB535
DH31 BB639C
DH32 BB639C
DH33 BB639C
DH34 BB639C
DH35 BB639C
DH41 BB639C
DH42 BB639C
DH43 BB639C
DH44 BB639C
DH45 BA592
DH70 BA592
DH47 5V6
RH11 22K
RH12 22K
RH10 22K
RH01 470K
RH06 22K
RH05 22K
RH04 22K
RH02 22K
RH03 3K9
RH08 3K9
RH30 1R
RH38 22K
RH31 22K
RH33 470K
RH32 22K
RH36 470K
RH39 22K
RH49 4R7
RH35 150K
RH34 150K
RH07 150K
RH37 27R
RH45 22K
RH44 22K
RH43 22K
RH42 2R2
RH41 22K
RH46 470R
RH09 47R
RH82 2R2
RH81 8R2
RH80 4R7
RH58 4K7
RH70 180R
RH71 10K
RH85 6K8
RH86 4R7
RH87 56R
RH88 2R2
RH91 4K7
RH93 10K0
RH94 3U9
RH92 15R
RH73 47K
RH72 33R
RH59 1K2
RH50 39K
RH52 22K
RH55 220R
RH56 330R
RH53 100R
RH51 10K
RH13 10K
RH14 47K
RH15 100K
CH29 22N
CH07 1P
CH04 100P
CH05 10P
CH02 4P7
CH03 12P
CH08 9P
CH09 100P
CH11 9P
CH12 100P
CH95 15N
CH06 1N
CH34 1N
CH36 1N
CH31 10N
CH28 5P6
CH33 82P
CH35 22N
CH37 1N
CH32 1N
CH38 1N
CH39 4N7
CH43 0P75
CH44 470P
CH45 220P
CH49 10N
CH48 22N
CH42 VAL
CH17 82P
CH71 1N
CH72 1nF
CH14 100P
CH13 100P
CH46 1N
CH47 1N
CH85 22n
CH87 2P
CH86 27p
CH93 22P
CH79 18P
CH82 1N
CH83 39p
CH96 4N7
CH91 4N7
CH92 4N7
CH75 22P
CH76 10N
CH20 0.75P
CH21 1p
CH22 1p
CH23 0.75P
CH24 8P
CH25 47P
CH50 1P5
CH51 1P5
CH52 1P5
CH53 1P5
CH54 100P
CH55 100P
CH70 33N
CH59 10N
CH88 1N
CH56 15N
CH89 1N
CH81 1N
CH90 10N
CH94 1N
CH78 1N
LH01
LH02
LH03
LH04
LH05
LH06
LH07
LH08
LH09
LH10
LH11
LH12
LH20
LH22
LH30
LH31
LH32
LH33
LH34
LH35
LH36
LH37
LH38
LH39
LH40
LH41
LH42
LH43
LH47
LH48
LH49
LH81
LH82
LH83
LH84
Pr.
B II
B III
B I
* DENOTES : NO COMPONENTS IN LAYOUT
BANDSWITCH
BI =03
BII =06
BIII=05
INP
① AGC
② TU
③ AS
④ CL
⑤ DA
⑥ UB
⑦ 5V
⑧ LOCK
⑨ 33V
⑪ IF1

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
REMOTE / MICROCONTROLLER - GESTION / MICROCONTROLEUR - FERNBEDIENUNGS- UND MICROCONTROLLERSTUFEN - MICROPROCESSORE - REMOTO / MICROCONTROLADOR


IR004
CXK581000AM-70LL
1 Mbit SRAM
IR002
MX27C8000MC-10
4 Mbit OTP/ROM
IR007
74LS00
IR005
M24C16MN6
NVM
16K Bit
serial
CMOS
EEPROM
IR006
TCE2ACU
Bus expander
IR300
CXD2057M
BR001
BR003
BR004
BP005
TR013 BCR141
TR015 BC856B
TR020 DTC113ZK
TR060 BCR141
TR061 BC856B
TR062 BC846B
TR120 BC846B
TR030 BCR141
TT050 BC856B
TT060 BC856B
TT070 BC856B
TT080 BC846B
DR030 LL4148
DR031 ZMM5.1
DR113 LL4148
QR300 14M31
LED_R
LED_G
IR
5V_UP
KEYB
CNT1_20V
H_DRIVE
+8V
PAN_SWITCH
+40V
DEGAUSS
AQR_ON
GND
+5V
+8V_STBY
INF_POW_FAIL
PO
RESET
CNT2_20V
Connecting safety PSB / SSB
to digital module (NC)
RESTART
ON
IIC_CL_1
IIC_DA_1
(PP) +5V_UP
(PP) +8V_STBY
(FE) CVBS_TXT
(PP) RESET
(UC) HDFL
(UC) VDFL
R_MP
G_MP
B_MP
FB_MP
(FE) FB1_DET
(VP) EFC
(to DP via BV001)
(VP) G2_ADJUST_
(PP) PO
(FE) PIN8_WAKEUP
(PP) DEGAUSS
(FE) FB2_FORCE
(FE) FB1_FORCE
(FE) TRAP_INFO
(DP) PAN_SWITCH
(AP) MASTER_MUTE
(FE) CVBS_LB_DET
Led-Port
Po-Port
TP15
TP16

(RP) REMOTE PART
RP.20000.00
RP.20001.00
RP.20002.00
RP.20003.00

(LBD) LETTERBOX DETECTION
LBD.20000.00

⚠ Safety Part
When repairing, use original part only

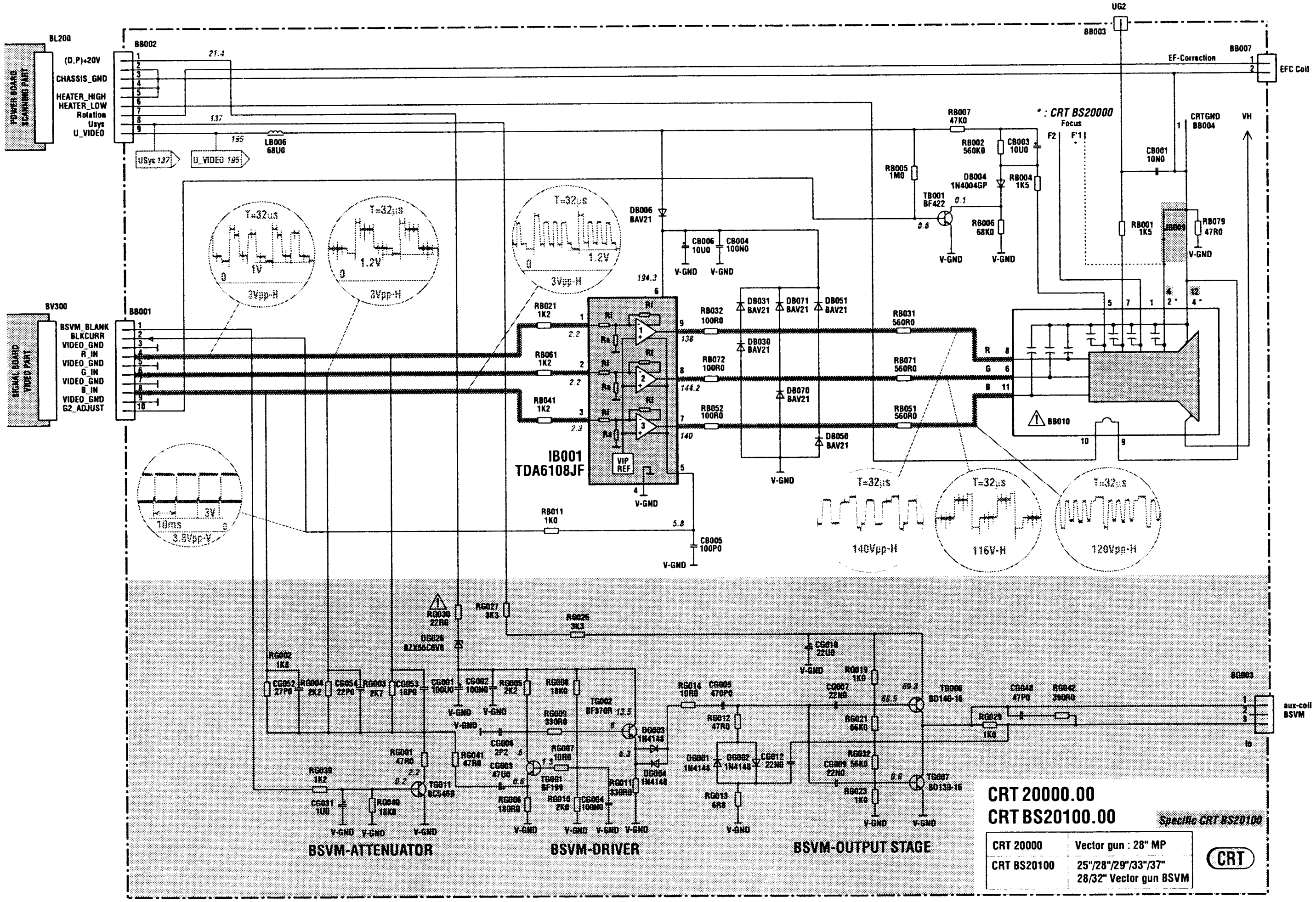
Piece de securite
N'utilisez que les pieces d'origine

Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

*	IR002	RR005	RR025	RR026	RR117	RR118
RP 20000 00	MX27C4000MC-90	1K5	560R0	270R0	-	10K0
RP 20001 00	MX27C8000MC-10	39K	0	0	-	10K0
RP 20002 00	MX27C8000MC-10	1K5	560R0	270R0	10K0	-
RP 20003 00	MX27C4000MC-90	1K5	560R0	270R0	-	10K0

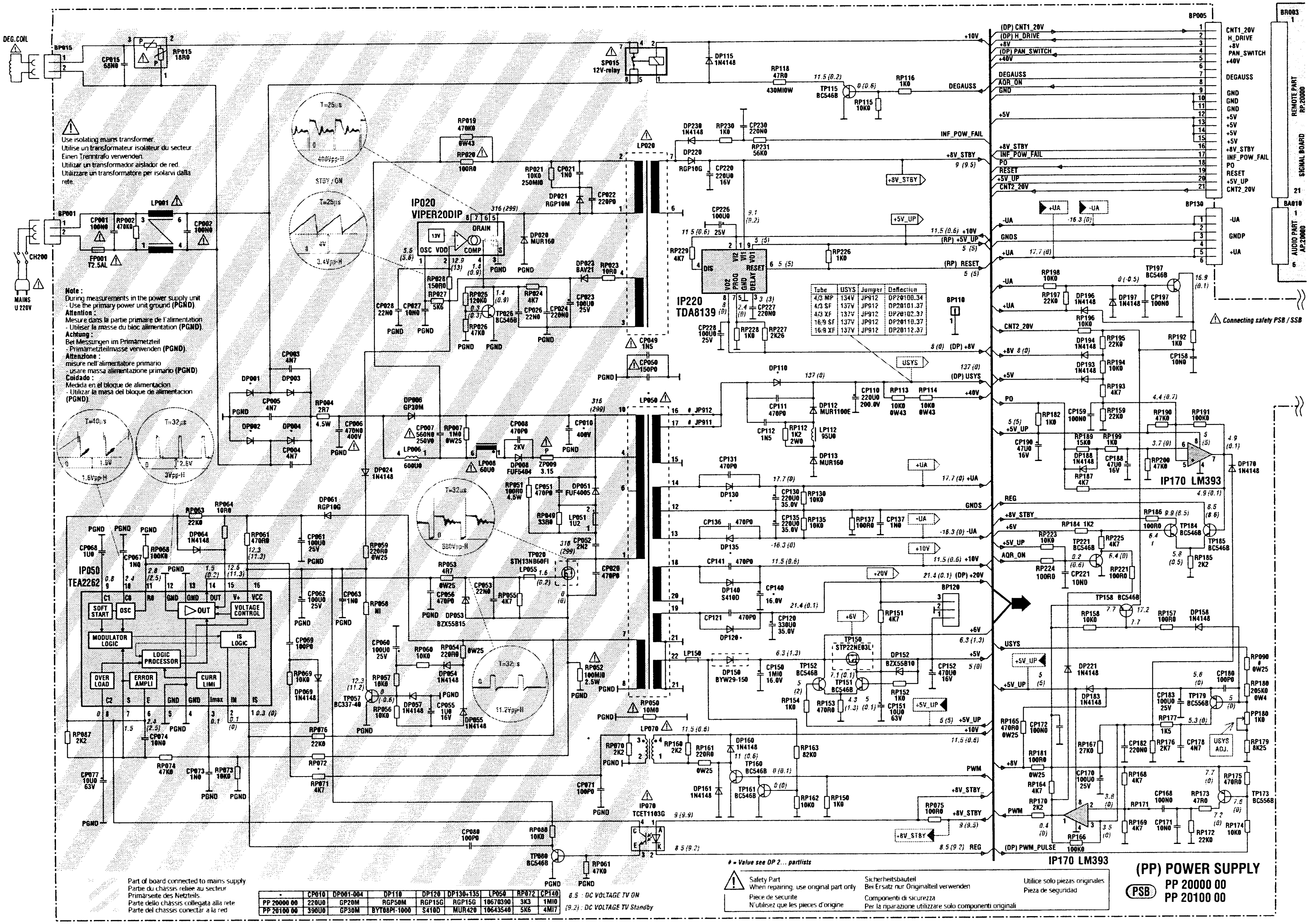
#	IR001	RR131	RR132
RP 20000 00 RP 20001 00 RP 20002 00	JAM	47K0	4K7
RP 20003 00	JAL	4K7	47K0

VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE - PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO
CRT 20000.00 - CRT BS20100.00


BL200
POWER BOARD SCANNING PART
(D,P)+20V
CHASSIS_GND
HEATER_HIGH
HEATER_LOW
Rotation
Usys
U_VIDEO
BB002
21.4
137
195
LB006 68U0
USys 137
U_VIDEO 195
BV300
SIGNAL BOARD VIDEO PART
BSVM_BLANK
BLKCURR
VIDEO_GND
R_IN
VIDEO_GND
G_IN
VIDEO_GND
B_IN
VIDEO_GND
G2_ADJUST
BB001
T=32µs
1V
3Vpp-H
1.2V
10ms
3V
3.8Vpp-V
RB021 1K2
RB061 1K2
RB041 1K2
2.2
2.3
Ri
Rf
Ra
VIP REF
IB001
TDA6108JF
194.3
138
144.2
140
V-GND
RB011 1K0
5.8
CB005 100P0
DB006 BAV21
CB006 10U0
CB004 100N0
RB032 100R0
RB072 100R0
RB052 100R0
DB031 BAV21
DB071 BAV21
DB051 BAV21
DB030 BAV21
DB070 BAV21
DB050 BAV21
RB031 560R0
RB071 560R0
RB051 560R0
140Vpp-H
116V-H
120Vpp-H
UG2
BB003
BB007
EF-Correction
EFC Coil
RB007 47K0
RB005 1M0
RB002 560K0
CB003 10U0
DB004 1N4004GP
RB004 1K5
TB001 BF422
0.1
8.6
RB006 68K0
* : CRT BS20000
Focus
F2
F'1
CRTGND
BB004
VH
CB001 10N0
RB001 1K5
IB009
RB079 47R0
R
G
B
BB010
RG030 22R0
DG026 BZX55C8V8
RG027 3K3
RG026 3K3
RG002 1K8
CG052 27P0
RG004 2K2
CG054 22P0
RG003 2K7
CG053 18P0
CG001 100U0
CG002 100N0
RG005 2K2
RG008 18K0
RG009 330R0
TG002 BF370R
13.5
DG003 1N4148
DG004 1N4148
CG006 2P2
RG007 10R0
CG003 47U0
TG001 BF199
RG001 47R0
RG041 47R0
RG039 1K2
CG031 1U0
RG040 18K0
TG011 BC546B
0.2
RG006 180R0
RG010 2K0
CG004 100N0
RG011 330R0
RG014 10R0
CG005 470P0
RG012 47R0
DG001 1N4148
DG002 1N4148
CG012 22N0
RG013 6R8
CG010 22U0
RG019 1K0
CG007 22N0
RG021 56K0
RG032 56K0
CG009 22N0
RG023 1K0
TG006 BD140-16
TG007 BD139-16
69.3
68.5
CG048 47P0
RG042 390R0
RG029 1K0
BG003
aux-coil BSVM
BSVM-ATTENUATOR
BSVM-DRIVER
BSVM-OUTPUT STAGE
CRT 20000.00
CRT BS20100.00
Specific CRT BS20100
CRT 20000 Vector gun : 28" MP
CRT BS20100 25"/28"/29"/33"/37" 28/32" Vector gun BSVM
CRT

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

POWER SUPPLY PART - PARTIE ALIMENTATION - NETZTEIL - ALIMENTAZIONE - ALIMENTACIÓN


DEG.COIL
BP015
CP015 68N0
RP015 18R0
SP015 12V-relay
BP001
CP001 100N0
RP002 470K0
LP001
CP002 100N0
FP001 T2.5AL
CH200
MAINS U 220V
IP020 VIPER20DIP
DRAIN
OSC VDD
COMP
SOURCE
PGND
LP020
IP220 TDA8139
IP050 TEA2262
SOFT START
OSC
MODULATOR LOGIC
LOGIC PROCESSOR
IS LOGIC
OUT
VOLTAGE CONTROL
OVER LOAD
ERROR AMPLI
CURR LIMI
LP050
TP020 STH13NB60FI
TP057 BC337-40
TP080 BC546B
IP070 TCET1103G
IP170 LM393
TP150 STP22NE03L
BP005
CNT1_20V
H_DRIVE
+8V
PAN_SWITCH
+40V
DEGAUSS
GND
+5V
+8V_STBY
INF_POW_FAIL
PO
RESET
+5V_UP
CNT2_20V
BR003
REMOTE PART RP.20000
SIGNAL BOARD
BP130
-UA
GNDP
+UA
BA010
AUDIO PART AP.20000
Connecting safety PSB / SSB
USYS ADJ.
T=25µs
400Vpp-H
STBY / ON
T=25µs
3.4Vpp-H
T=40µs
1.6Vpp-H
T=32µs
3Vpp-H
T=32µs
580Vpp-H
T=32µs
11.2Vpp-H
PWM
REG
(DP) PWM_PULSE

⚠ Use isolating mains transformer.
Utilise un transformateur isolateur du secteur
Einen Trenntrafo verwenden.
Utilizar un transformador aislador de red.
Utilizzare un transformatore per isolarvi dalla rete.

Note :
During measurements in the power supply unit
- Use the primary power unit ground **(PGND)**.

Attention :
Mesure dans la partie primaire de l'alimentation
- Utiliser la masse du bloc alimentation **(PGND)**.

Achtung :
Bei Messungen im Primärnetzteil
- Primärnetzteilmasse verwenden **(PGND)**.

Attenzione :
misure nell'alimentatore primario
- usare massa alimentazione primario **(PGND)**

Cuidado :
Medida en el bloque de alimentacion
- Utilizar la masa del bloque de alimentacion **(PGND)**.

Tube	USYS	Jumper	Deflection
4/3 MP	134V	JP912	DP20100.34
4/3 SF	137V	JP912	DP20101.37
4/3 XF	137V	JP912	DP20102.37
16/9 SF	137V	JP912	DP20110.37
16/9 XF	137V	JP912	DP20112.37

Part of board connected to mains supply
Partie du châssis reliée au secteur
Primärseite des Netzteils
Parte dello châssis collegata alla rete
Parte del châssis conectar a la red

*	CP010	DP001-004	DP110	DP120	DP130+135	LP050	RP072	CP140
PP 20000 00	220U0	GP20M	RGP50M	RGP15G	RGP15G	10670390	3K3	1MI0
PP 20100 00	390U0	GP30M	BYT08PI-1000	S410D	MUR420	10643540	5K6	4MI7

8.5 : DC VOLTAGE TV ON
(9.2) : DC VOLTAGE TV Standby

# = Value see DP 2... partlists

⚠ Safety Part
When repairing, use original part only
Piece de securite
N'utilisez que les pieces d'origine

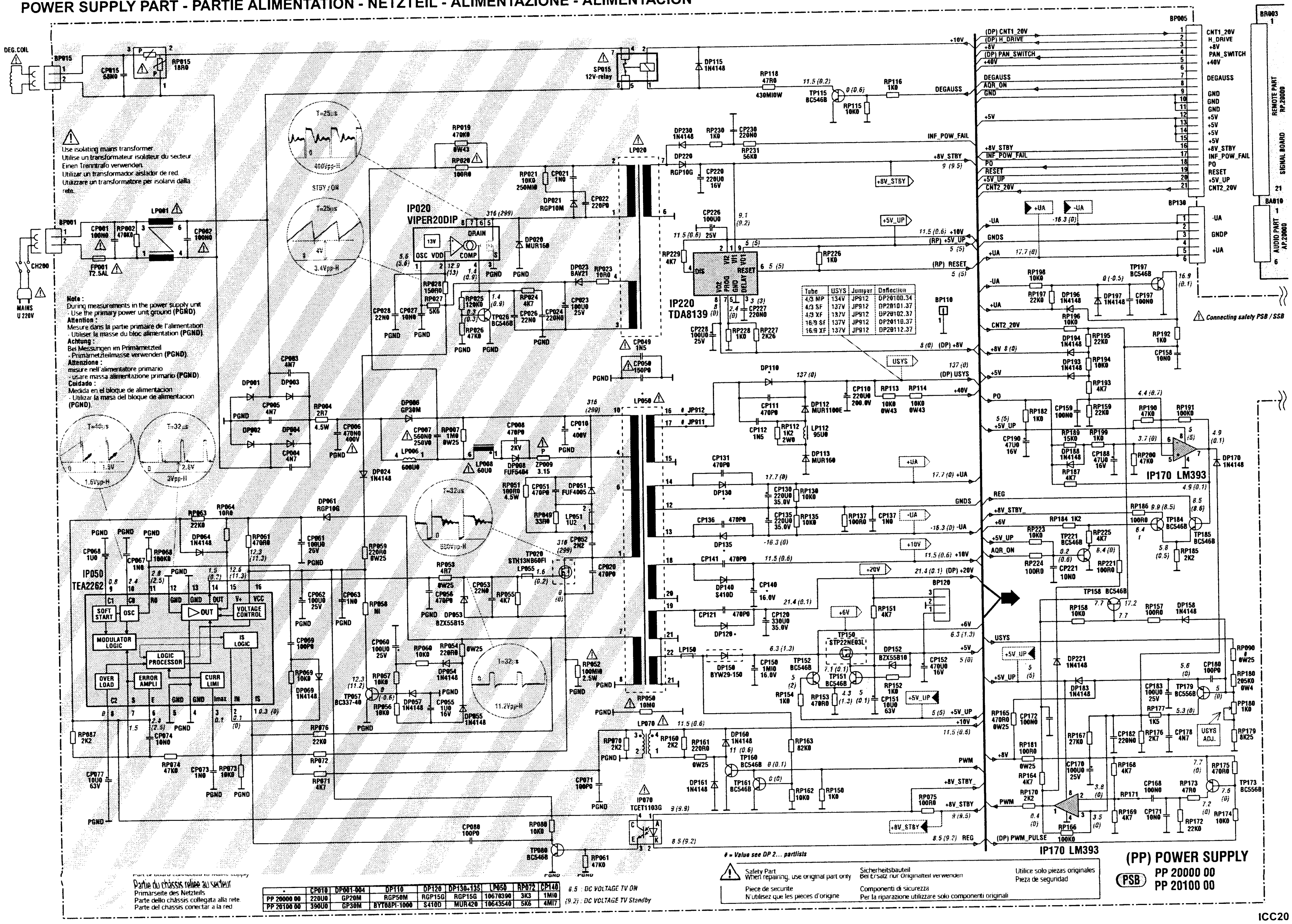
Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden
Componenti di sicurezza
Per la riparazione utilizzare solo componenti originali

Utilice solo piezas originales
Pieza de seguridad

(PP) POWER SUPPLY
PSB PP 20000 00
PP 20100 00

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

POWER SUPPLY PART - PARTIE ALIMENTATION - NETZTEIL - ALIMENTAZIONE - ALIMENTACIÓN


DEG.COIL
BP015
CP015 68N0
RP015 18R0
SP015 12V-relay
MAINS U 220V
CH200
BP001
CP001 100N0
RP002 470K0
LP001
CP002 100N0
FP001 T2.5AL
IP020 VIPER20DIP
DRAIN
OSC VDD
COMP
RP019 470K0
RP020 100R0
RP021 10K0 250MI0
CP021 1N0
DP021 RGP10M
CP022 220P0
DP020 MUR160
DP023 BAV21
RP023 10R0
CP023 100U0 25V
RP028 150R0
RP027 5K6
RP025 120K0
RP024 4K7
TP026 BC546B
RP026 47K0
CP026 22N0
CP024 220N0
CP028 22N0
CP027 10N0
LP020
CP049 1N5
CP050 150P0
LP050
DP001
DP002
DP003
DP004
CP003 4N7
CP005 4N7
CP004 4N7
RP004 2R7 4.5W
CP006 470N0 400V
DP006 GP30M
CP007 560N0 250V0
RP007 1M0 0W25
LP006 600U0
LP008 60U0
CP008 470P0
DP008 FUF5404
ZP009 3.15
CP010 400V
DP024 1N4148
RP051 100R0 4.5W
CP051 470P0
DP051 FUF4005
RP049 33R0
LP051 1U2
CP052 2K2
TP020 STH13NB60FI
LP055
CP020 470P0
DP061 RGP10G
IP050 TEA2262
SOFT START
OSC
MODULATOR LOGIC
LOGIC PROCESSOR
OVER LOAD
ERROR AMPLI
CURR LIMI
VOLTAGE CONTROL
IS LOGIC
PGND
RP063 22K0
RP064 10R0
DP064 1N4148
RP061 470R0
CP061 100U0 25V
CP068 1U0
CP067 1N0
RP068 100K0
RP059 220R0 0W25
RP053 4R7
CP056 470P0
CP053 22N0
RP055 4K7
DP053 BZX55B15
CP062 100U0 25V
CP063 1N0
RP058
CP069 100P0
RP069 10K0
DP069 1N4148
CP060 100U0 25V
RP060 10K0
RP054 220R0
DP054 1N4148
RP057 10K0
TP057 BC337-40
RP056 10K0
DP057 1N4148
CP055 1U0 16V
DP055 1N4148
RP087 2K2
CP074 10N0
RP074 47K0
CP073 1N0
RP073 10K0
RP076 22K0
RP072
RP071 4K7
CP077 10U0 63V
CP071 100P0
RP052 100MI0 2.5W
RP050 10M0
CP080 100P0
RP080 10K0
TP080 BC546B
RP061 47K0
IP070 TCET1103G
LP070
RP070 2K2
RP160 2K2
RP161 220R0
DP160 1N4148
TP160 BC546B
DP161 1N4148
TP161 BC546B
RP162 10K0
RP150 1K0
RP163 82K0
RP075 100R0
DP115 1N4148
RP118 47R0
430MI0W
TP115 BC546B
RP116 1K0
RP115 10K0
DP230 1N4148
RP230 1K0
CP230 220N0
DP220 RGP10G
RP231 56K0
CP220 220U0 16V
CP226 100U0 25V
RP229 4K7
IP220 TDA8139
RP226 1K0
CP227 220N0
CP228 100U0 25V
RP228 1K0
RP227 2K26
BP110
DP110
CP110 220U0 200.0V
RP113 10K0 0W43
RP114 10K0 0W43
CP111 470P0
DP112 MUR1100E
CP112 1N5
RP112 1K2 2W0
LP112 95U0
DP113 MUR160
CP131 470P0
DP130
CP130 220U0 35.0V
RP130 10K0
CP136 470P0
DP135
CP135 220U0 35.0V
RP135 10K0
RP137 100R0
CP137 1N0
CP141 470P0
DP140 S410D
CP140 16.0V
RP151 4K7
BP120
CP121 470P0
DP120
CP120 330U0 35.0V
TP150 STP22NE03L
DP152 BZX55B10
LP150
DP150 BYW29-150
CP150 1MI0 16.0V
TP152 BC546B
TP151 BC546B
RP154 1K0
RP153 470R0
RP152 1K0
CP151 10U0 63V
CP152 470U0 16V
BP005
BR003
REMOTE PART RP.20000
SIGNAL BOARD
BP130
BA010
AUDIO PART AP.20000
CNT1_20V
H_DRIVE
+8V
PAN_SWITCH
+40V
DEGAUSS
AQR_ON
GND
+5V
+8V_STBY
INF_POW_FAIL
PO
RESET
+5V_UP
CNT2_20V
-UA
GNDS
+UA
GNDP
USYS
REG
+6V
+10V
+20V
PWM
(DP) PWM_PULSE
Connecting safety PSB / SSB
RP198 10K0
RP197 22K0
DP196 1N4148
DP197 1N4148
CP197 100N0
TP197 BC546B
RP196 10K0
DP194 1N4148
RP195 22K0
DP193 1N4148
RP194 10K0
RP193 4K7
RP192 1K0
CP158 10N0
RP182 1K0
CP159 100N0
RP159 22K0
RP190 47K0
RP191 100K0
CP190 47U0 16V
RP189 15K0
RP199 1K0
DP188 1N4148
CP188 47U0 16V
RP187 4K7
RP200 47K0
IP170 LM393
DP170 1N4148
RP186 100R0
RP184 1K2
TP184 BC546B
TP185 BC546B
RP185 2K2
RP223 10K0
TP221 BC546B
RP225 4K7
RP224 100R0
CP221 10N0
RP221 100R0
TP158 BC546B
RP158 10K0
RP157 100R0
DP158 1N4148
DP221 1N4148
DP183 1N4148
RP090 0W25
RP180 205K0 0W4
CP180 100P0
CP183 100U0 25V
TP179 BC556B
PP180 1K0
RP177 1K5
RP176 2K7
CP178 4N7
USYS ADJ.
RP179 8K25
RP165 470R0 0W25
CP172 100N0
RP181 100R0 0W25
RP167 27K0
CP182 220N0
CP170 100U0 25V
RP168 4K7
RP164 4K7
RP170 2K2
RP171
CP168 100N0
RP173 47R0
RP175 470R0
TP173 BC556B
RP169 4K7
CP171 10N0
RP172 22K0
RP174 10K0
RP166 100K0

⚠ Use isolating mains transformer.
Utilise un transformateur isolateur du secteur
Einen Trenntrafo verwenden.
Utilizar un transformador aislador de red.
Utilizzare un transformatore per isolarvi dalla rete.

Note :
During measurements in the power supply unit
- Use the primary power unit ground **(PGND)**

Attention :
Mesure dans la partie primaire de l'alimentation
- Utiliser la masse du bloc alimentation **(PGND)**.

Achtung :
Bei Messungen im Primärnetzteil
- Primärnetzteilmasse verwenden **(PGND)**.

Attenzione :
misure nell'alimentatore primario
- usare massa alimentazione primario **(PGND)**

Cuidado :
Medida en el bloque de alimentacion
- Utilizar la masa del bloque de alimentacion **(PGND)**.

Tube	USYS	Jumper	Deflection
4/3 MP	134V	JP912	DP20100.34
4/3 SF	137V	JP912	DP20101.37
4/3 XF	137V	JP912	DP20102.37
16/9 SF	137V	JP912	DP20110.37
16/9 XF	137V	JP912	DP20112.37

Part of board connected to mains supply
Partie du châssis reliée au secteur
Primärseite des Netzteils
Parte dello chàssis collegata alla rete.
Parte del chassis conectar a la red

*	CP010	DP001-004	DP110	DP120	DP130+135	LP050	RP072	CP140
PP 20000 00	220U0	GP20M	RGP50M	RGP15G	RGP15G	10670390	3K3	1MI0
PP 20100 00	390U0	GP30M	BYT08PI-1000	S410D	MUR420	10643540	5K6	4MI7

8.5 : DC VOLTAGE TV ON
(9.2) : DC VOLTAGE TV Standby

= Value see DP 2... partlists

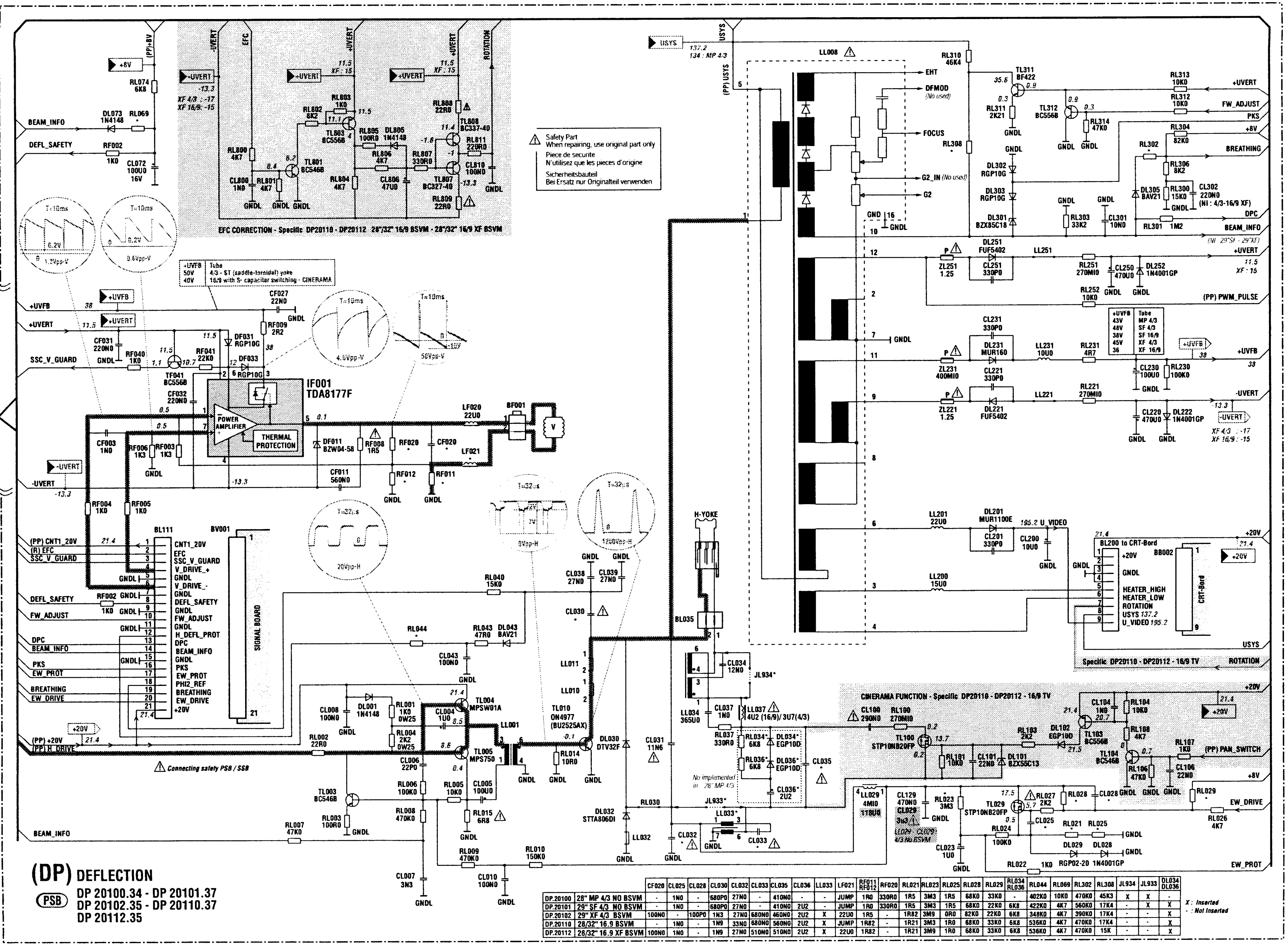
⚠ Safety Part When repairing, use original part only	Sicherheitsbauteil Bei Ersatz nur Originalteil verwenden	Utilice solo piezas originales Pieza de seguridad
Piece de securite N'utilisez que les pieces d'origine	Componenti di sicurezza Per la riparazione utilizzare solo componenti originali	

(PP) POWER SUPPLY

PSB PP 20000 00
PP 20100 00

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

SCANNING - BALAYAGE - ABLENKUNG - BARRIDO - SCANSIONE


EFC CORRECTION - Specific DP20110 - DP20112 28"/32" 16/9 BSVM - 28"/32" 16/9 XF BSVM
+8V
BEAM_INFO
DEFL_SAFETY
+UVERT
-UVERT
EFC
ROTATION
TL801 BC546B
TL803 BC556B
TL808 BC337-40
TL807 BC327-40
DL805 1N4148
Safety Part
When repairing, use original part only
Piece de securite
N'utilisez que les pieces d'origine
Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden
+UVFB 50V 40V
Tube
4/3 - ST (saddle-toroidal) yoke
16/9 with S- capacitor switching - CINERAMA
+UVFB
SSC_V_GUARD
TF041 BC556B
IF001
TDA8177F
POWER AMPLIFIER
THERMAL PROTECTION
DF011 BZW04-58
BF001
BL111
BV001
SIGNAL BOARD
CNT1_20V
EFC
SSC_V_GUARD
V_DRIVE_+
GNDL
V_DRIVE_-
DEFL_SAFETY
FW_ADJUST
H_DEFL_PROT
DPC
BEAM_INFO
PKS
EW_PROT
PHI2_REF
BREATHING
EW_DRIVE
+20V
(PP) CNT1_20V
(R) EFC
(PP) +20V
(PP) H_DRIVE
Connecting safety PSB / SSB
TL004 MPSW01A
TL005 MPS750
TL003 BC546B
LL001
TL010 ON4977 (BU2525AX)
DL030 DTV32F
DL032 STTA806DI
H-YOKE
BL035
JL934*
LL034 365U0
LL037 4U2 (16/9)/ 3U7(4/3)
Not implemented in 28" MP 4/3
JL933*
LL008
USYS
(PP) USYS
EHT
DFMOD (No used)
FOCUS
G2_IN (No used)
G2
TL311 BF422
TL312 BC556B
FW_ADJUST
PKS
BREATHING
DPC
BEAM_INFO
DL251 FUF5402
DL252 1N4001GP
(PP) PWM_PULSE
DL231 MUR160
DL221 FUF5402
DL222 1N4001GP
DL201 MUR1100E
U_VIDEO
BL200 to CRT-Bord
BB002
CRT-Bord
HEATER_HIGH
HEATER_LOW
ROTATION
USYS 137.2
U_VIDEO 195.2
Specific DP20110 - DP20112 - 16/9 TV
CINERAMA FUNCTION - Specific DP20110 - DP20112 - 16/9 TV
TL100 STP10NB20FP
TL029 STP10NB20FP
TL103 BC556B
TL104 BC546B
DL101 BZX55C13
DL102 EGP10D
(PP) PAN_SWITCH
EW_DRIVE
EW_PROT
DL029 RGP02-20
DL028 1N4001GP
T=10ms
T=32µs

(DP) DEFLECTION

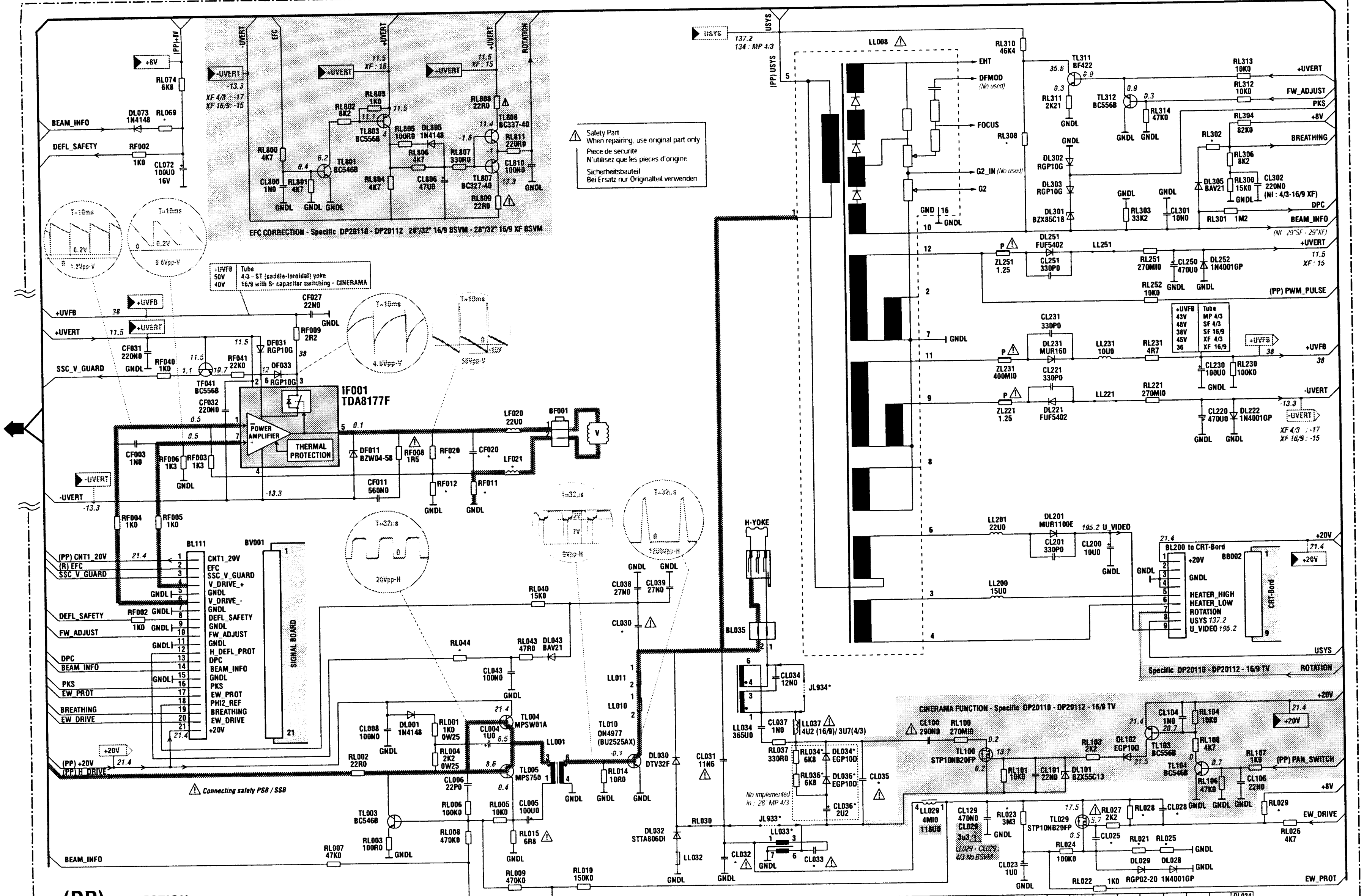
(PSB) DP 20100.34 - DP 20101.37
DP 20102.35 - DP 20110.37
DP 20112.35

		CF020	CL025	CL028	CL030	CL032	CL033	CL035	CL036	LL033	LF021	RF011 RF012	RF020	RL021	RL023	RL025	RL028	RL029	RL034 RL036	RL044	RL069	RL302	RL308	JL934	JL933	DL034 DL036
DP.20100	28" MP 4/3 NO BSVM	-	1N0	-	680P0	27N0	-	410N0	-	-	JUMP	1R0	330R0	1R5	3M3	1R5	68K0	33K0	-	402K0	10K0	470K0	45K3	X	X	-
DP.20101	29" SF 4/3 NO BSVM	-	1N0	-	680P0	27N0	-	410N0	2U2	-	JUMP	1R0	330R0	1R5	3M3	1R5	68K0	22K0	6K8	422K0	4K7	560K0	17K4	-	X	X
DP.20102	29" XF 4/3 BSVM	100N0	-	100P0	1N3	27N0	680N0	460N0	2U2	X	22U0	1R5	-	1R82	3M9	0R0	82K0	22K0	6K8	348K0	4K7	390K0	17K4	-	-	X
DP.20110	28/32" 16.9 BSVM	-	1N0	-	1N9	33N0	680N0	560N0	2U2	X	JUMP	1R82	-	1R21	3M3	1R0	68K0	33K0	6K8	536K0	4K7	470K0	17K4	-	-	X
DP.20112	28/32" 16.9 XF BSVM	100N0	1N0	-	1N9	27N0	510N0	510N0	2U2	X	22U0	1R82	-	1R21	3M9	1R0	68K0	33K0	6K8	536K0	4K7	470K0	15K	-	-	X

X : Inserted
- : Not Inserted

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

SCANNING - BALAYAGE - ABLENKUNG - BARRIDO - SCANSIONE


EFC CORRECTION - Specific DP20110 - DP20112 28"/32" 16/9 BSVM - 28"/32" 16/9 XF BSVM
+8V
BEAM_INFO
DEFL_SAFETY
+UVFB
+UVERT
SSC_V_GUARD
-UVERT
EFC
ROTATION
IF001
TDA8177F
POWER AMPLIFIER
THERMAL PROTECTION
V
BL111
BV001
SIGNAL BOARD
CNT1_20V
EFC
SSC_V_GUARD
V_DRIVE_+
GNDL
V_DRIVE_-
GNDL
DEFL_SAFETY
GNDL
FW_ADJUST
GNDL
H_DEFL_PROT
DPC
BEAM_INFO
GNDL
PKS
EW_PROT
PHI2_REF
BREATHING
EW_DRIVE
+20V
(PP) CNT1_20V
(R) EFC
SSC_V_GUARD
DEFL_SAFETY
FW_ADJUST
DPC
BEAM_INFO
PKS
EW_PROT
BREATHING
EW_DRIVE
(PP) +20V
(PP) H_DRIVE
Connecting safety PSB / SSB
H-YOKE
USYS
EHT
DFMOD
FOCUS
G2_IN
G2
+UVERT
FW_ADJUST
PKS
+8V
BREATHING
DPC
BEAM_INFO
(PP) PWM_PULSE
+UVFB
-UVERT
U_VIDEO
BL200 to CRT-Bord
BB002
CRT-Bord
+20V
GNDL
HEATER_HIGH
HEATER_LOW
ROTATION
USYS 137.2
U_VIDEO 195.2
Specific DP20110 - DP20112 - 16/9 TV
CINERAMA FUNCTION - Specific DP20110 - DP20112 - 16/9 TV
(PP) PAN_SWITCH
EW_DRIVE
EW_PROT
Safety Part
When repairing, use original part only
Piece de securite
N'utilisez que les pieces d'origine
Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden
+UVFB Tube
50V 4/3 - ST (saddle-toroidal) yoke
40V 16/9 with S- capacitor switching - CINERAMA
+UVFB Tube
43V MP 4/3
48V SF 4/3
38V SF 16/9
45V XF 4/3
36 XF 16/9
T=10ms
T=32µs
LL008
TL311 BF422
TL312 BC556B
TL004 MPSW01A
TL005 MPS750
TL003 BC546B
TL010 ON4977 (BU2525AX)
DL030 DTV32F
DL032 STTA806DI
TL100 STP10NB20FP
TL029 STP10NB20FP
TL103 BC556B
TL104 BC546B
TL801 BC546B
TL803 BC556B
TL808 BC337-40
TL807 BC327-40
Not implemented in: 28" MP 4/3
LL029 - CL029 4/3 No BSVM

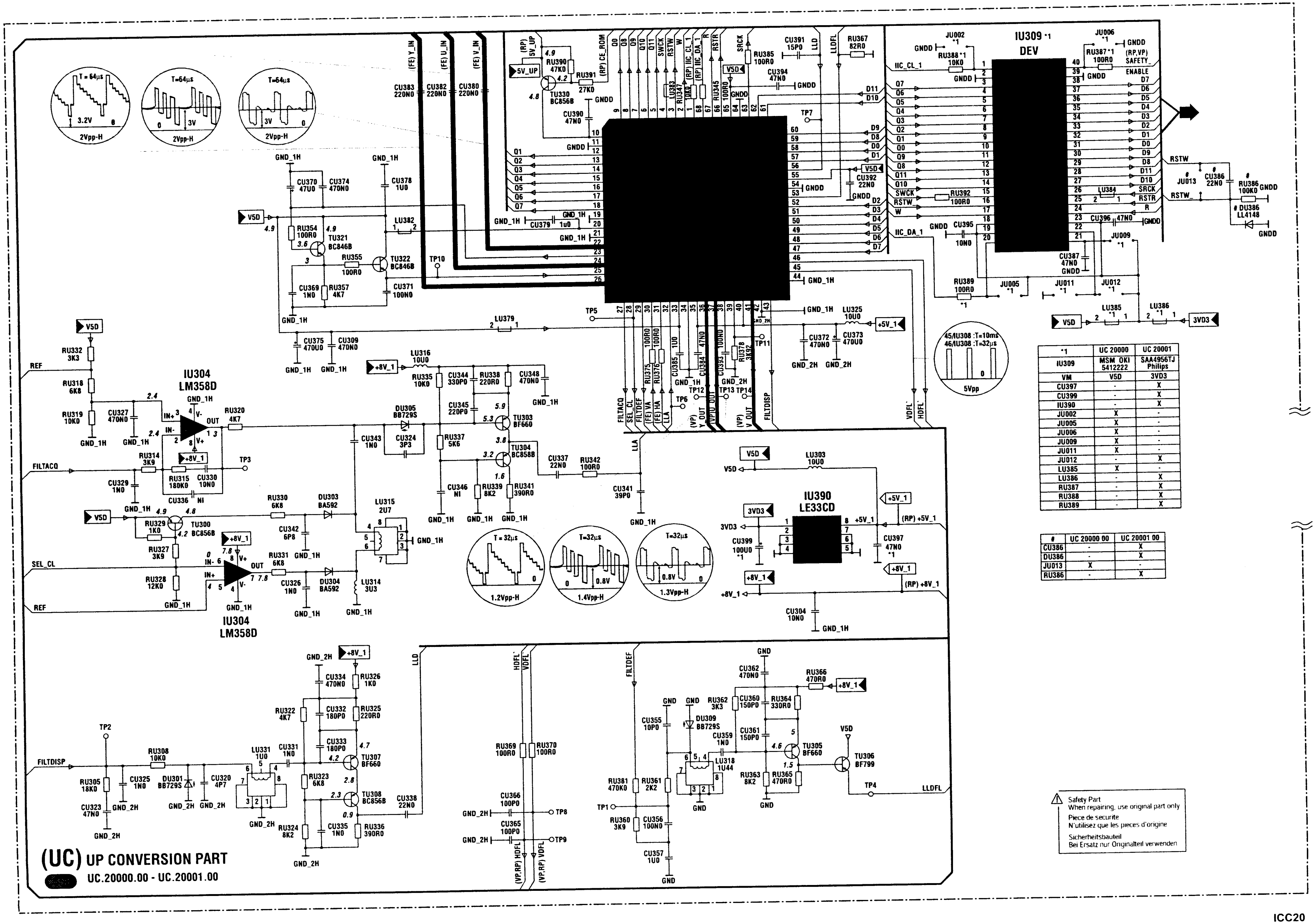
(DP) DEFLECTION

PSB DP 20100.34 - DP 20101.37
DP 20102.35 - DP 20110.37
DP 20112.35

		CF020	CL025	CL028	CL030	CL032	CL033	CL035	CL036	LL033	LF021	RF011 RF012	RF020	RL021	RL023	RL025	RL028	RL029	RL034 RL036	RL044	RL069	RL302	RL308	JL934	JL933	DL034 DL036
DP.20100	28" MP 4/3 NO BSVM	-	1N0	-	680P0	27N0	-	410N0	-	-	JUMP	1R0	330R0	1R5	3M3	1R5	68K0	33K0	-	402K0	10K0	470K0	45K3	X	X	-
DP.20101	29" SF 4/3 NO BSVM	-	1N0	-	680P0	27N0	-	410N0	2U2	-	JUMP	1R0	330R0	1R5	3M3	1R5	68K0	22K0	6K8	422K0	4K7	560K0	17K4	-	X	X
DP.20102	29" XF 4/3 BSVM	100N0	-	100P0	1N3	27N0	680N0	460N0	2U2	X	22U0	1R5	-	1R82	3M9	0R0	82K0	22K0	6K8	348K0	4K7	390K0	17K4	-	-	X
DP.20110	28/32" 16.9 BSVM	-	1N0	-	1N9	33N0	680N0	560N0	2U2	X	JUMP	1R82	-	1R21	3M3	1R0	68K0	33K0	6K8	536K0	4K7	470K0	17K4	-	-	X
DP.20112	28/32" 16.9 XF BSVM	100N0	1N0	-	1N9	27N0	510N0	510N0	2U2	X	22U0	1R82	-	1R21	3M9	1R0	68K0	33K0	6K8	536K0	4K7	470K0	15K	-	-	X

X : Inserted
- : Not Inserted

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
UPCONVERTER PART - PARTIE CONVERSION - UPCONVERTER STUFEN - CIRCUITO UPCONVERTER - SUPRACONVERSOR



(UC) UP CONVERSION PART
UC.20000.00 - UC.20001.00
IU304 LM358D
IU309 *1 DEV
IU390 LE33CD
TU300 BC856B
TU321 BC846B
TU322 BC846B
TU303 BF660
TU304 BC858B
TU305 BF660
TU306 BF799
TU307 BF660
TU308 BC856B
TU330 BC856B
DU305 BB729S
DU309 BB729S
DU301 BB729S
DU303 BA592
DU304 BA592
DU386 LL4148
LU315 2U7
LU314 3U3
LU318 1U44
LU331 1U0
(FE) Y_IN
(FE) U_IN
(FE) V_IN
5V_UP
V5D
3VD3
+8V_1
+5V_1
REF
FILTACQ
SEL_CL
FILTDISP
LLDFL
HDFL
VDFL
RSTW
IIC_CL_1
IIC_DA_1
GND_1H
GND_2H
T=64µs
3.2V
2Vpp-H
3V
T=32µs
1.2Vpp-H
0.8V
1.4Vpp-H
1.3Vpp-H
45/IU308 :T=10ms
46/IU308 :T=32µs
5Vpp
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP11
TP12
TP13
TP14

*1	UC 20000	UC 20001
IU309	MSM OKI 5412222	SAA4956TJ Philips
VM	V5D	3VD3
CU397	-	X
CU399	-	X
IU390	-	X
JU002	X	-
JU005	X	-
JU006	X	-
JU009	X	-
JU011	X	-
JU012	-	X
LU385	X	-
LU386	-	X
RU387	-	X
RU388	-	X
RU389	-	X

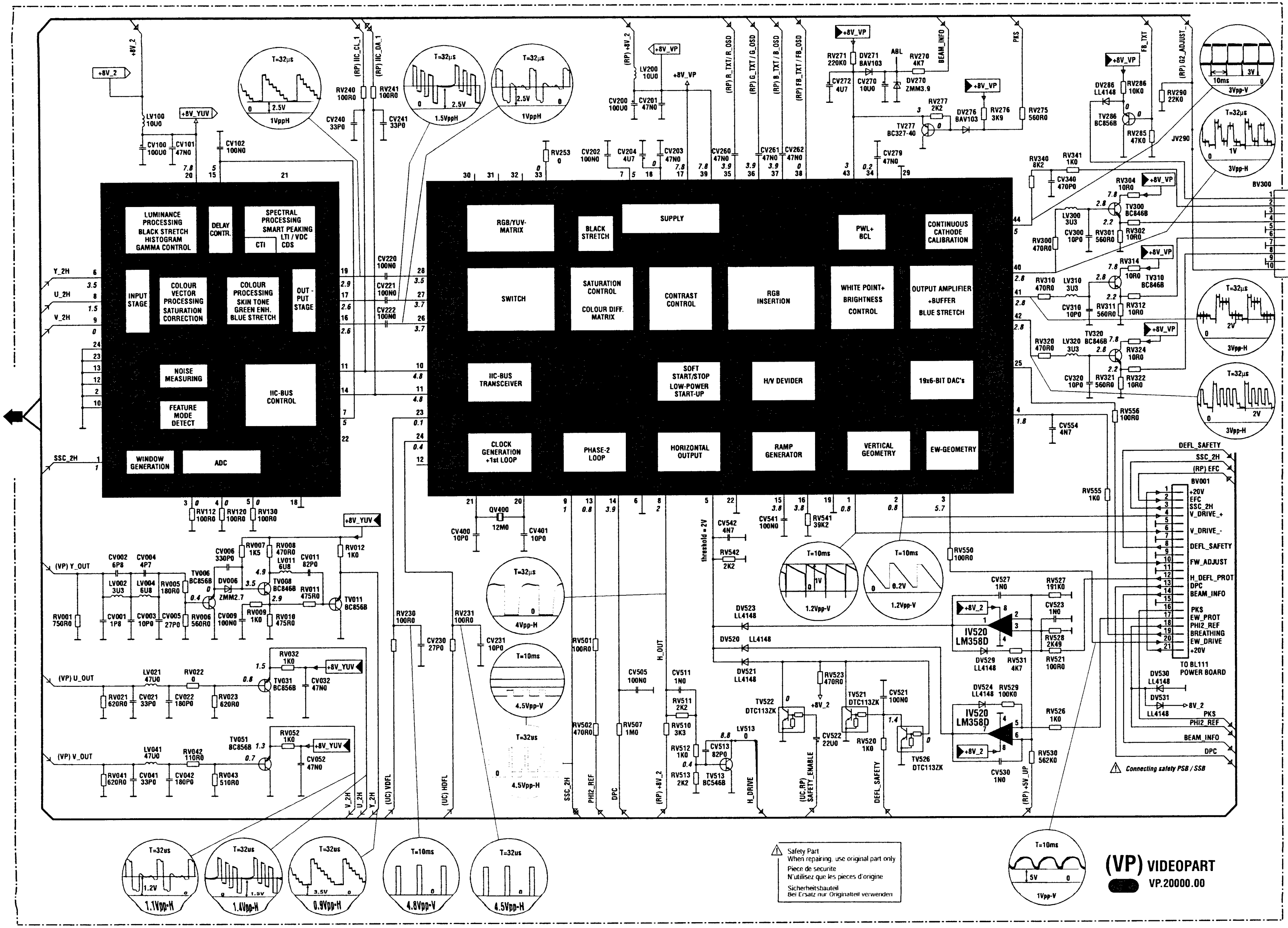
#	UC 20000 00	UC 20001 00
CU386	-	X
DU386	-	X
JU013	X	-
RU386	-	X

⚠ Safety Part
When repairing, use original part only

Piece de securite
N'utilisez que les pieces d'origine

Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

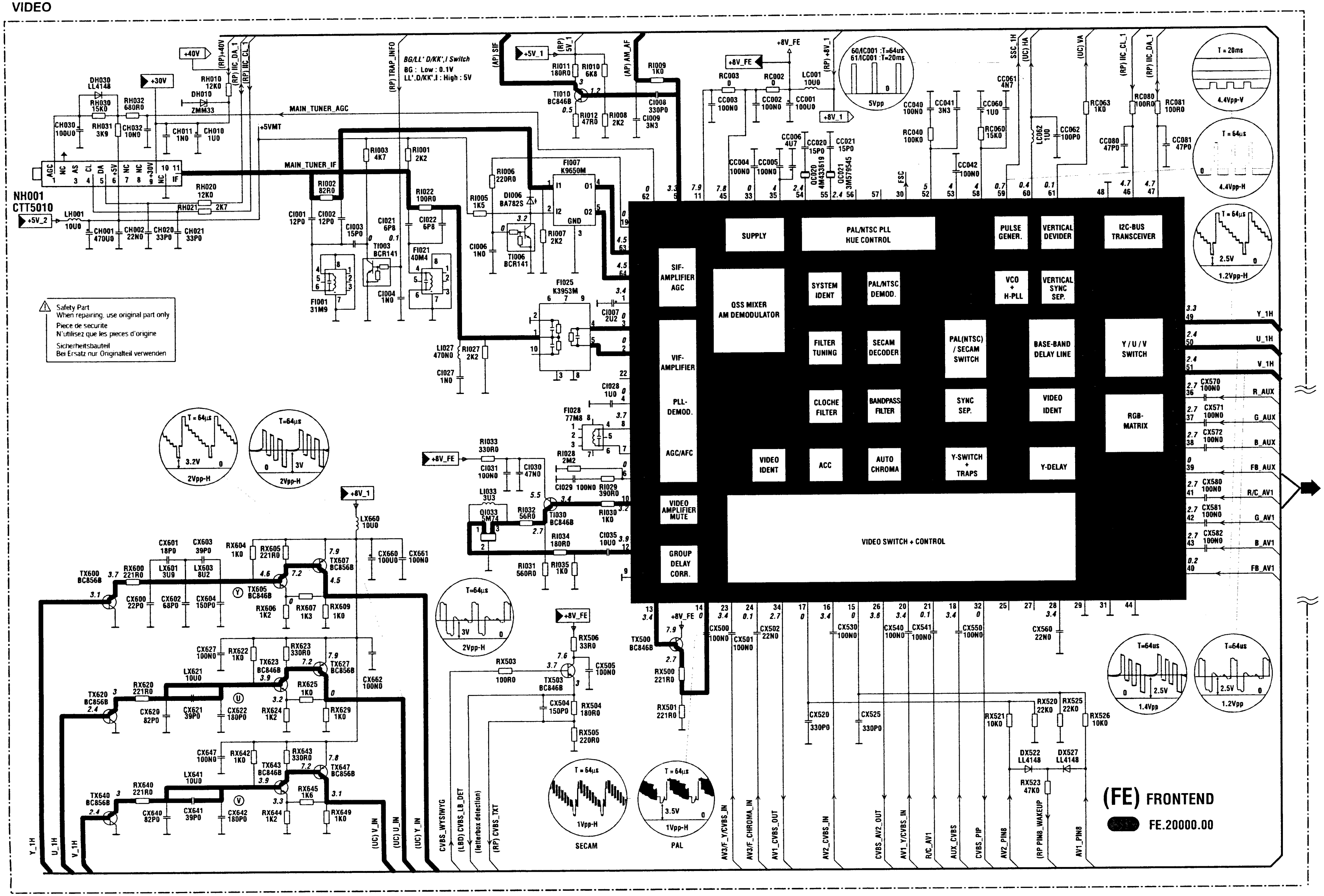
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
VIDEO PART - PARTIE VIDEO - VIDEO-SIGNALVERARBEITUNG - ELABORAZIONE VIDEO - TRATAMENTO VIDEO



LUMINANCE PROCESSING
BLACK STRETCH
HISTOGRAM
GAMMA CONTROL
DELAY CONTR.
SPECTRAL PROCESSING
SMART PEAKING
LTI / VDC
CTI
CDS
INPUT STAGE
COLOUR VECTOR PROCESSING
SATURATION CORRECTION
COLOUR PROCESSING
SKIN TONE
GREEN ENH.
BLUE STRETCH
OUT-PUT STAGE
NOISE MEASURING
FEATURE MODE DETECT
IIC-BUS CONTROL
WINDOW GENERATION
ADC
RGB/YUV-MATRIX
BLACK STRETCH
SUPPLY
PWL+ BCL
CONTINUOUS CATHODE CALIBRATION
SWITCH
SATURATION CONTROL
COLOUR DIFF. MATRIX
CONTRAST CONTROL
RGB INSERTION
WHITE POINT+ BRIGHTNESS CONTROL
OUTPUT AMPLIFIER +BUFFER BLUE STRETCH
IIC-BUS TRANSCEIVER
SOFT START/STOP LOW-POWER START-UP
H/V DEVIDER
19x6-BIT DAC's
CLOCK GENERATION +1st LOOP
PHASE-2 LOOP
HORIZONTAL OUTPUT
RAMP GENERATOR
VERTICAL GEOMETRY
EW-GEOMETRY
Y_2H
U_2H
V_2H
SSC_2H
+8V_2
+8V_YUV
+8V_VP
(VP) Y_OUT
(VP) U_OUT
(VP) V_OUT
(RP) IIC_CL_1
(RP) IIC_DA_1
(RP) R_TXT / R_OSD
(RP) G_TXT / G_OSD
(RP) B_TXT / B_OSD
(RP) FB_TXT / FB_OSD
BEAM_INFO
PKS
FB_TXT
(RP) G2_ADJUST
BV300
To BB001 CRT
BSVM_BLANK
BLKCURR
R_OUT
G_OUT
B_OUT
G2_ADJUST
DEFL_SAFETY
SSC_2H
(RP) EFC
BV001
+20V
EFC
SSC_2H
V_DRIVE_+
V_DRIVE_-
DEFL_SAFETY
FW_ADJUST
H_DEFL_PROT
DPC
BEAM_INFO
PKS
EW_PROT
PHI2_REF
BREATHING
EW_DRIVE
+20V
TO BL111 POWER BOARD
IV520 LM358D
TV522 DTC113ZK
TV521 DTC113ZK
TV526 DTC113ZK
TV513 BC546B
TV300 BC846B
TV310 BC846B
TV320 BC846B
TV277 BC327-40
TV286 BC856B
TV006 BC856B
TV008 BC846B
TV011 BC856B
TV031 BC856B
TV051 BC856B
QV400 12M0
V_2H
U_2H
Y_2H
(UC) VDFL
(UC) HDFL
SSC_2H
PHI2_REF
DPC
(RP) +8V_2
H_OUT
H_DRIVE
(UC,RP) SAFETY_ENABLE
DEFL_SAFETY
(RP) +5V_UP
threshold = 2V
T=32µs
T=10ms
1VppH
1.5VppH
3Vpp-V
3Vpp-H
4Vpp-H
4.5Vpp-V
4.5Vpp-H
1.2Vpp-V
1.1Vpp-H
1.4Vpp-H
0.9Vpp-H
4.8Vpp-V
1Vpp-V
Connecting safety PSB / SSB
Safety Part
When repairing, use original part only
Piece de securite
N'utilisez que les pieces d'origine
Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden
(VP) VIDEOPART
VP.20000.00

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
FRONTEND PART (1) - EINGANGSSTUFEN (1) - PRESE FRONTALI (1) - FRONT END PART (1)

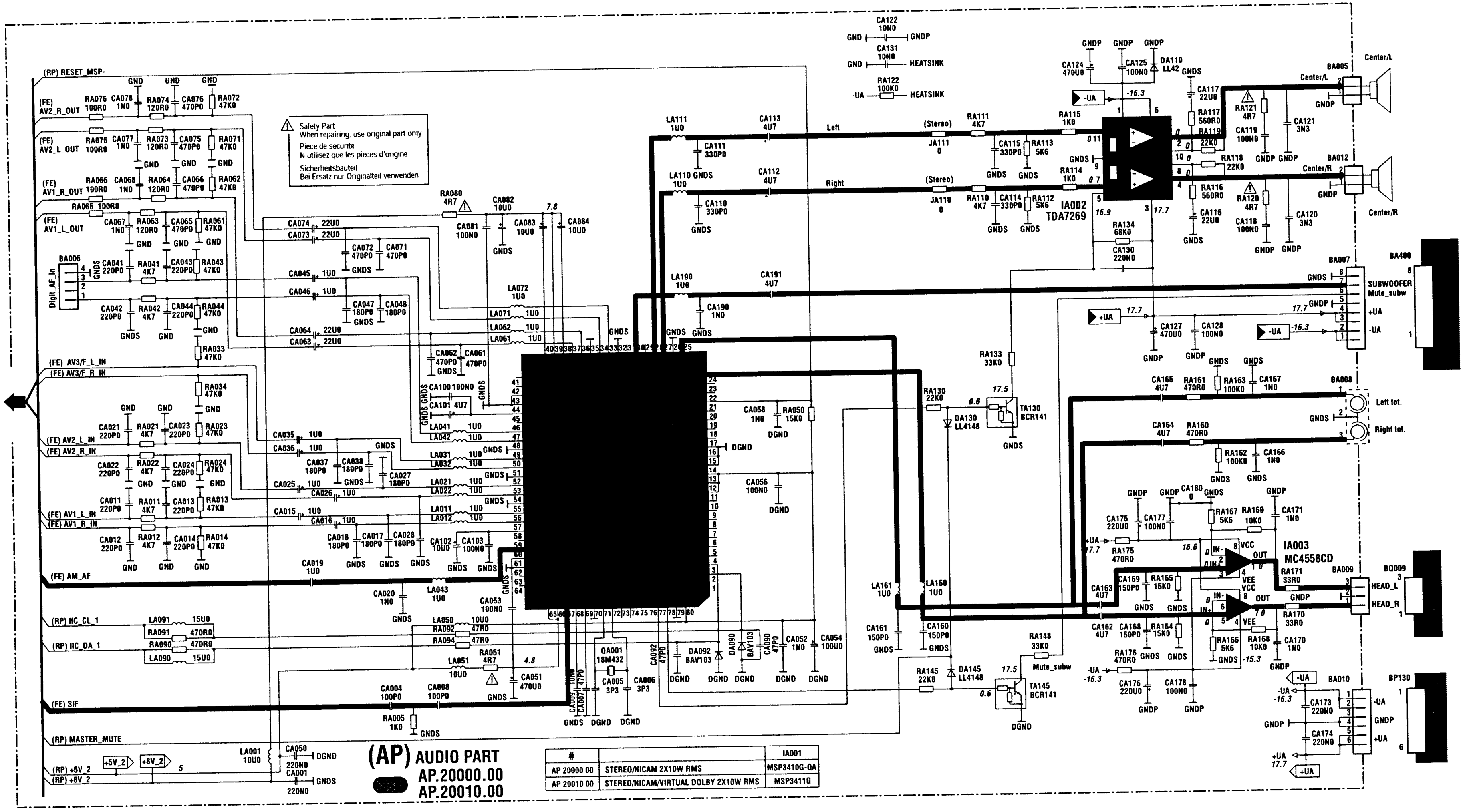
RF/FI / VIDEO SIGNAL PROCESSING - HF/FI / TRAITEMENT LUMINANCE CHROMINANCE - HF-, ZF- UND VIDEO-SIGNALVERARBEITUNG - RF/FI / ELABORAZIONE SEGNALE VIDEO - RF/FI / TRATAMENTO SEÑAL VIDEO


NH001
CTT5010
+5V_2
+40V
+30V
MAIN_TUNER_AGC
MAIN_TUNER_IF
+5VMT
BG/LL' D/KK',I Switch
BG : Low : 0.1V
LL'.D/KK',I : High : 5V
(RP) TRAP_INFO
(AP) SIF
+5V_1
(AP) AM_AF
+8V_FE
(RP) +8V_1
60/IC001 :T=64us
61/IC001 :T=20ms
5Vpp
SSC_1H
(UC) HA
(UC) VA
(RP) IIC_CL_1
(RP) IIC_DA_1
T = 20ms
4.4Vpp-V
T = 64μs
4.4Vpp-H
2.5V
1.2Vpp-H
SUPPLY
PAL/NTSC PLL
HUE CONTROL
PULSE
GENER.
VERTICAL
DEVIDER
I2C-BUS
TRANSCEIVER
SIF-
AMPLIFIER
AGC
QSS MIXER
AM DEMODULATOR
SYSTEM
IDENT
PAL/NTSC
DEMOD.
VCO
+
H-PLL
VERTICAL
SYNC
SEP.
VIF-
AMPLIFIER
FILTER
TUNING
SECAM
DECODER
PAL(NTSC)
/ SECAM
SWITCH
BASE-BAND
DELAY LINE
Y / U / V
SWITCH
PLL-
DEMOD.
CLOCHE
FILTER
BANDPASS
FILTER
SYNC
SEP.
VIDEO
IDENT
RGB-
MATRIX
AGC/AFC
VIDEO
IDENT
ACC
AUTO
CHROMA
Y-SWITCH
+
TRAPS
Y-DELAY
VIDEO
AMPLIFIER
MUTE
GROUP
DELAY
CORR.
VIDEO SWITCH + CONTROL
Y_1H
U_1H
V_1H
R_AUX
G_AUX
B_AUX
FB_AUX
R/C_AV1
G_AV1
B_AV1
FB_AV1
FI001
31M9
FI021
40M4
FI007
K9650M
FI025
K3953M
FI028
77M8
TI003
BCR141
TI006
BCR141
TI010
BC846B
TI030
BC846B
QI033
5M74
DI006
BA782S
+8V_1
LX660
10U0
TX600
BC856B
TX605
BC846B
TX607
BC856B
TX620
BC856B
TX623
BC846B
TX627
BC856B
TX640
BC856B
TX643
BC846B
TX647
BC856B
TX500
BC846B
TX503
BC846B
T=64μs
3.2V
2Vpp-H
3V
2Vpp-H
1.4Vpp
1.2Vpp
SECAM
PAL
1Vpp-H
3.5V
Y_1H
U_1H
V_1H
(UC) V_IN
(UC) U_IN
(UC) Y_IN
CVBS_WYSIWYG
(LBD) CVBS_LB_DET
(letterbox detection)
(RP) CVBS_TXT
AV3/F_Y/CVBS_IN
AV3/F_CHROMA_IN
AV1_CVBS_OUT
AV2_CVBS_IN
CVBS_AV2_OUT
AV1_Y/CVBS_IN
R/C_AV1
AUX_CVBS
CVBS_PIP
AV2_PIN8
(RP PIN8_WAKEUP)
AV1_PIN8
DX522
LL4148
DX527
LL4148
(FE) FRONTEND
FE.20000.00

Safety Part
When repairing, use original part only
Piece de securite
N'utilisez que les pieces d'origine
Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

AUDIO PART - PARTIE AUDIO - AUDIOSTUFEN - CIRCUITO AUDIO - AUDIO


(RP) RESET_MSP-
(FE) AV2_R_OUT
(FE) AV2_L_OUT
(FE) AV1_R_OUT
(FE) AV1_L_OUT
BA006
Digit_AF_In
(FE) AV3/F_L_IN
(FE) AV3/F_R_IN
(FE) AV2_L_IN
(FE) AV2_R_IN
(FE) AV1_L_IN
(FE) AV1_R_IN
(FE) AM_AF
(RP) IIC_CL_1
(RP) IIC_DA_1
(FE) SIF
(RP) MASTER_MUTE
(RP) +5V_2
(RP) +8V_2
QA001
18M432
Left
Right
IA002
TDA7269
IA003
MC4558CD
TA130
BCR141
TA145
BCR141
Mute_subw
BA005
Center/L
BA012
Center/R
BA007
BA400
SUBWOOFER
Mute_subw
+UA
-UA
BA008
Left tot.
Right tot.
BA009
BQ009
HEAD_L
HEAD_R
BA010
BP130
GNDP
HEATSINK
(AP) AUDIO PART
AP.20000.00
AP.20010.00

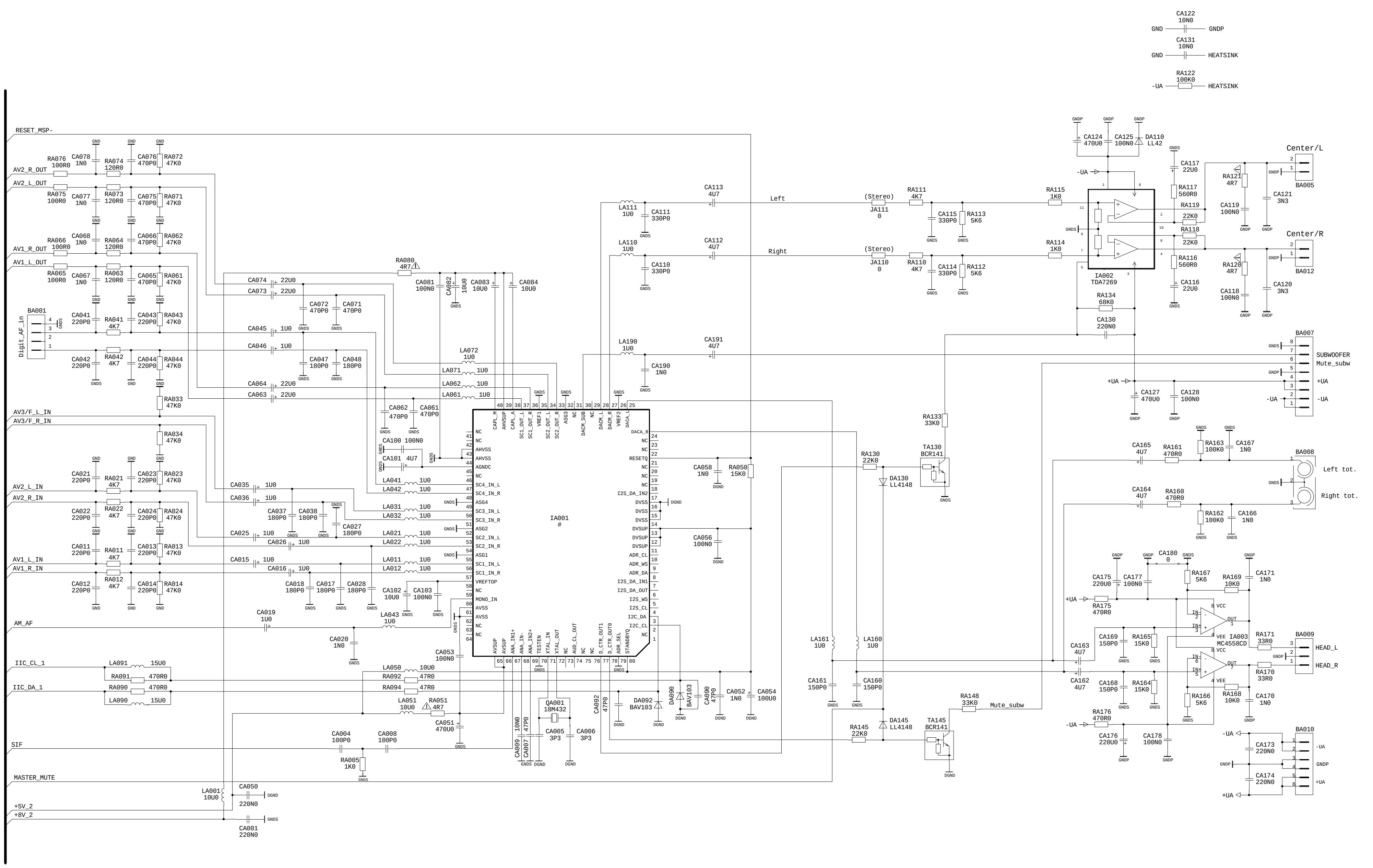
⚠ Safety Part
When repairing, use original part only

Piece de securite
N'utilisez que les pieces d'origine

Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

#		IA001
AP 20000 00	STEREO/NICAM 2X10W RMS	MSP3410G-QA
AP 20010 00	STEREO/NICAM/VIRTUAL DOLBY 2X10W RMS	MSP3411G

THIS DRAWING CANNOT BE COMMUNICATED TO UNAUTHORIZED PERSONS COPIED UNLESS PERMITTED IN WRITING


RESET_MSP-
AV2_R_OUT
AV2_L_OUT
AV1_R_OUT
AV1_L_OUT
BA001
Digit_AF_in
AV3/F_L_IN
AV3/F_R_IN
AV2_L_IN
AV2_R_IN
AV1_L_IN
AV1_R_IN
AM_AF
IIC_CL_1
IIC_DA_1
SIF
MASTER_MUTE
+5V_2
+8V_2
IA001
#
QA001
18M432
Left
Right
(Stereo)
JA111
JA110
IA002
TDA7269
Center/L
Center/R
BA005
BA012
BA007
SUBWOOFER
Mute_subw
+UA
-UA
BA008
Left tot.
Right tot.
TA130
BCR141
TA145
BCR141
IA003
MC4558CD
BA009
HEAD_L
HEAD_R
BA010
GND
GNDP
GNDS
DGND
HEATSINK
CA122 10N0
CA131 10N0
RA122 100K0

#	IA001
AP 20000 00	MSP3410G-QA
AP 20010 00	MSP3451G

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

THOMSON MULTI MEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CTA_PEDUZZI

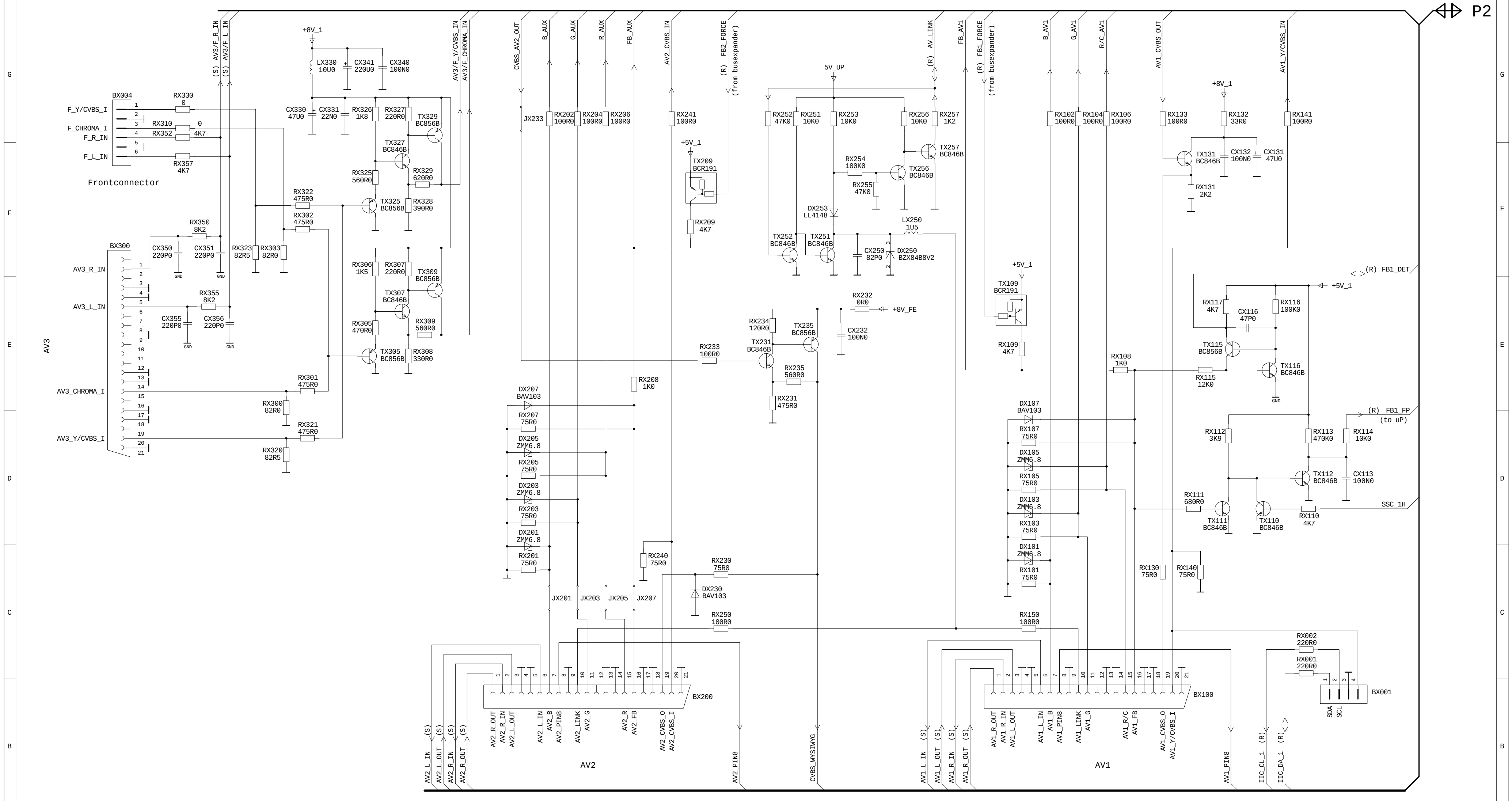
INDEX	DATE	NAME	DESCRIPTION
E	28.03.00	J.David	C36930
D	01.12.99	RIEDM.	CORRECTION
C	19.11.99	RIEDM.	C28630/29900 950/30220/270
B	23.08.99	RIEDM.	NR.ADDED 00L2-CORR.
A	11.05.99	RIEDM.	00L1-CORR.

DRAWN
ON: 10.03.99
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER
AP.20000.00	10623730
AP.20010.00	10623930

TV
IC20
PAGE: 1
OF : 1

PCAD FORMAT DIN A1


P2
BX004
F_Y/CVBS_I
F_CHROMA_I
F_R_IN
F_L_IN
Frontconnector
RX330 0
RX310 0
RX352 4K7
RX357 4K7
(S) AV3/F_R_IN
(S) AV3/F_L_IN
+8V_1
LX330 10U0
CX341 220U0
CX340 100N0
CX330 47U0
CX331 22N0
RX326 1K8
RX327 220R0
TX329 BC856B
TX327 BC846B
RX325 560R0
RX329 620R0
RX322 475R0
TX325 BC856B
RX328 390R0
RX302 475R0
RX350 8K2
BX300
CX350 220P0
CX351 220P0
RX323 82R5
RX303 82R0
AV3_R_IN
AV3_L_IN
RX355 8K2
CX355 220P0
CX356 220P0
RX306 1K5
RX307 220R0
TX309 BC856B
TX307 BC846B
RX305 470R0
RX309 560R0
TX305 BC856B
RX308 330R0
AV3
AV3_CHROMA_I
RX301 475R0
RX300 82R0
AV3_Y/CVBS_I
RX321 475R0
RX320 82R5
AV3/F_Y/CVBS_IN
AV3/F_CHROMA_IN
CVBS_AV2_OUT
B_AUX
G_AUX
R_AUX
FB_AUX
AV2_CVBS_IN
(R) FB2_FORCE (from busexpander)
JX233
RX202 100R0
RX204 100R0
RX206 100R0
RX241 100R0
+5V_1
TX209 BCR191
RX209 4K7
RX208 1K0
DX207 BAV103
RX207 75R0
DX205 ZMM6.8
RX205 75R0
DX203 ZMM6.8
RX203 75R0
DX201 ZMM6.8
RX201 75R0
RX240 75R0
RX230 75R0
DX230 BAV103
JX201
JX203
JX205
JX207
RX250 100R0
RX233 100R0
5V_UP
RX252 47K0
RX251 10K0
RX253 10K0
RX254 100K0
RX255 47K0
TX256 BC846B
RX256 10K0
RX257 1K2
TX257 BC846B
(R) AV_LINK
DX253 LL4148
TX252 BC846B
TX251 BC846B
CX250 82P0
DX250 BZX84B8V2
LX250 1U5
RX232 0R0
+8V_FE
RX234 120R0
TX235 BC856B
CX232 100N0
TX231 BC846B
RX235 560R0
RX231 475R0
FB_AV1
(R) FB1_FORCE (from busexpander)
+5V_1
TX109 BCR191
RX109 4K7
B_AV1
G_AV1
R/C_AV1
RX102 100R0
RX104 100R0
RX106 100R0
AV1_CVBS_OUT
AV1_Y/CVBS_IN
RX133 100R0
+8V_1
RX132 33R0
TX131 BC846B
CX132 100N0
CX131 47U0
RX141 100R0
RX131 2K2
(R) FB1_DET
+5V_1
RX117 4K7
CX116 47P0
RX116 100K0
TX115 BC856B
RX108 1K0
RX115 12K0
TX116 BC846B
GND
DX107 BAV103
RX107 75R0
DX105 ZMM6.8
RX105 75R0
DX103 ZMM6.8
RX103 75R0
DX101 ZMM6.8
RX101 75R0
(R) FB1_FP (to uP)
RX112 3K9
RX113 470K0
RX114 10K0
TX112 BC846B
CX113 100N0
RX111 680R0
TX111 BC846B
TX110 BC856B
RX110 4K7
SSC_1H
RX130 75R0
RX140 75R0
RX150 100R0
RX002 220R0
RX001 220R0
BX001
SDA
SCL
BX200
AV2_R_OUT
AV2_R_IN
AV2_L_OUT
AV2_L_IN
AV2_B
AV2_PIN8
AV2_LINK
AV2_G
AV2_R
AV2_FB
AV2_CVBS_O
AV2_CVBS_I
(S) AV2_L_IN
(S) AV2_L_OUT
(S) AV2_R_IN
(S) AV2_R_OUT
AV2
AV2_PIN8
CVBS_WYSIWYG
BX100
AV1_R_OUT
AV1_R_IN
AV1_L_OUT
AV1_L_IN
AV1_B
AV1_PIN8
AV1_LINK
AV1_G
AV1_R/C
AV1_FB
AV1_CVBS_O
AV1_Y/CVBS_I
AV1_L_IN (S)
AV1_L_OUT (S)
AV1_R_IN (S)
AV1_R_OUT (S)
AV1
AV1_PIN8
IIC_CL_1 (R)
IIC_DA_1 (R)

THOMSON MULTI MEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CTV_MIKA

INDEX	DATE	NAME	DESCRIPTION
E	07.02.00	RIEDM.	C31330/34500
D	18.11.99	RIEDM.	C28630/29280 690/710 30250/260
H	04.04.00	J.David	C34650
G	31.03.00	J.David	C37700
F	27.03.00	J.David	C37100

DRAWN
ON: 11.03.99
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER	
FE.20000.00	10624110	00

TV
IC20
PAGE: 1
OF : 3

PCAD FORMAT DIN A1

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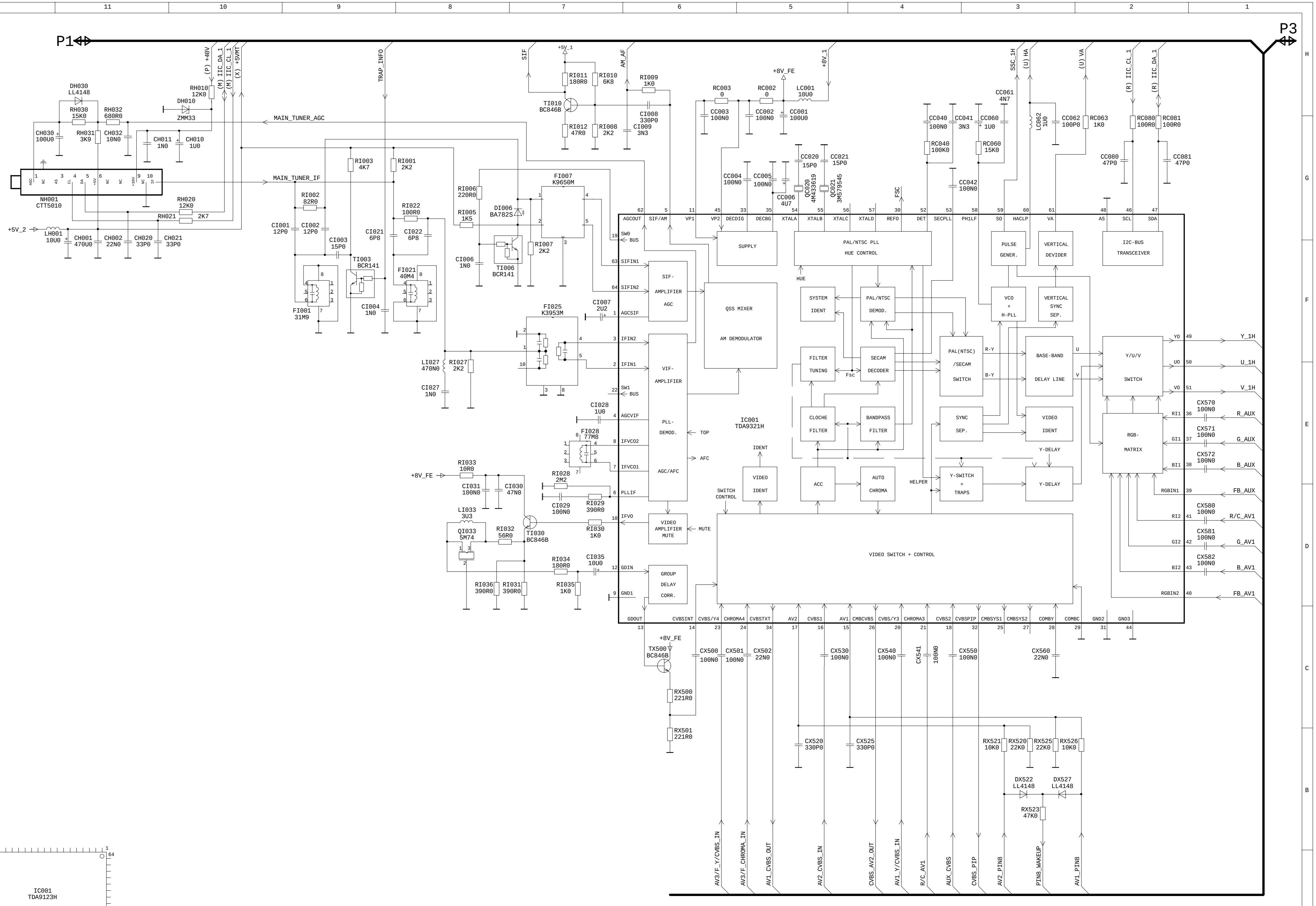
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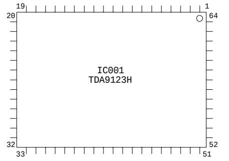
(M) IIC_DA_1
(M) IIC_CL_1
(X) +5VMT
TRAP_INFO
SIF
+5V_1
AM_AF
+8V_FE
+8V_1
SSC_1H
(U) HA
(U) VA
(R) IIC_CL_1
(R) IIC_DA_1
MAIN_TUNER_AGC
MAIN_TUNER_IF
NH001
CTT5010
DH030 LL4148
RH030 15K0
RH032 680R0
RH031 3K9
CH030 100U0
CH032 10N0
CH011 1N0
CH010 1U0
DH010 ZMM33
RH010 12K0
RH020 12K0
RH021 2K7
+5V_2
LH001 10U0
CH001 470U0
CH002 22N0
CH020 33P0
CH021 33P0
RI002 82R0
RI003 4K7
RI001 2K2
RI022 100R0
CI001 12P0
CI002 12P0
CI003 15P0
CI021 6P8
CI022 6P8
TI003 BCR141
FI001 31M9
FI021 40M4
CI004 1N0
RI006 220R0
RI005 1K5
DI006 BA782S
CI006 1N0
TI006 BCR141
RI007 2K2
FI007 K9650M
RI011 180R0
RI010 6K8
TI010 BC846B
RI012 47R0
RI008 2K2
RI009 1K0
CI008 330P0
CI009 3N3
FI025 K3953M
CI007 2U2
LI027 470N0
RI027 2K2
CI027 1N0
CI028 1U0
FI028 77M8
RI028 2M2
CI029 100N0
RI029 390R0
RI033 10R0
CI031 100N0
CI030 47N0
LI033 3U3
QI033 5M74
RI032 56R0
TI030 BC846B
RI030 1K0
RI034 180R0
CI035 10U0
RI035 1K0
RI036 390R0
RI031 390R0
RC003 0
RC002 0
LC001 10U0
CC003 100N0
CC002 100N0
CC001 100U0
CC004 100N0
CC005 100N0
CC006 4U7
CC020 15P0
CC021 15P0
QC020 4M433619
QC021 3M579545
FSC
CC040 100N0
CC041 3N3
CC060 1U0
CC061 4N7
LC062 1U0
CC062 100P0
RC063 1K0
RC040 100K0
RC060 15K0
CC042 100N0
RC080 100R0
RC081 100R0
CC080 47P0
CC081 47P0
IC001
TDA9321H
AGCOUT
SIF/AM
VP1
VP2
DECDIG
DECBG
XTALA
XTALB
XTALC
XTALD
REFO
DET
SECPLL
PH1LF
SO
HACLP
VA
AS
SCL
SDA
SW0 BUS
SIFIN1
SIFIN2
AGCSIF
IFIN2
IFIN1
SW1 BUS
AGCVIF
IFVCO2
IFVCO1
PLLIF
IFVO
GDIN
GND1
SIF-AMPLIFIER AGC
QSS MIXER
AM DEMODULATOR
VIF-AMPLIFIER
PLL-DEMOD.
AGC/AFC
TOP
AFC
VIDEO AMPLIFIER MUTE
MUTE
GROUP DELAY CORR.
SUPPLY
PAL/NTSC PLL HUE CONTROL
HUE
SYSTEM IDENT
PAL/NTSC DEMOD.
FILTER TUNING
SECAM DECODER
Fsc
CLOCHE FILTER
BANDPASS FILTER
PAL(NTSC) /SECAM SWITCH
R-Y
B-Y
BASE-BAND DELAY LINE
U
V
Y/U/V SWITCH
PULSE GENER.
VERTICAL DEVIDER
I2C-BUS TRANSCEIVER
VCO + H-PLL
VERTICAL SYNC SEP.
SYNC SEP.
VIDEO IDENT
Y-DELAY
Y-SWITCH + TRAPS
HELPER
RGB-MATRIX
ACC
AUTO CHROMA
VIDEO IDENT
IDENT
SWITCH CONTROL
VIDEO SWITCH + CONTROL
YO
UO
VO
RI1
GI1
BI1
RGBIN1
RI2
GI2
BI2
RGBIN2
Y_1H
U_1H
V_1H
CX570 100N0
R_AUX
CX571 100N0
G_AUX
CX572 100N0
B_AUX
FB_AUX
CX580 100N0
R/C_AV1
CX581 100N0
G_AV1
CX582 100N0
B_AV1
FB_AV1
GDOUT
CVBSINT
CVBS/Y4
CHROMA4
CVBSTXT
AV2
CVBS1
AV1
CMBCVBS
CVBS/Y3
CHROMA3
CVBS2
CVBSPIP
CMBSYS1
CMBSYS2
COMBY
COMBC
GND2
GND3
TX500 BC846B
RX500 221R0
RX501 221R0
CX500 100N0
CX501 100N0
CX502 22N0
CX530 100N0
CX540 100N0
CX541 100N0
CX550 100N0
CX560 22N0
CX520 330P0
CX525 330P0
RX521 10K0
RX520 22K0
RX525 22K0
RX526 10K0
DX522 LL4148
DX527 LL4148
RX523 47K0
AV3/F_Y/CVBS_IN
AV3/F_CHROMA_IN
AV1_CVBS_OUT
AV2_CVBS_IN
CVBS_AV2_OUT
AV1_Y/CVBS_IN
R/C_AV1
AUX_CVBS
CVBS_PIP
AV2_PIN8
PIN8_WAKEUP
AV1_PIN8


19
1
20
64
IC001
TDA9123H
32
52
33
51

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THOMSON multimedia
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

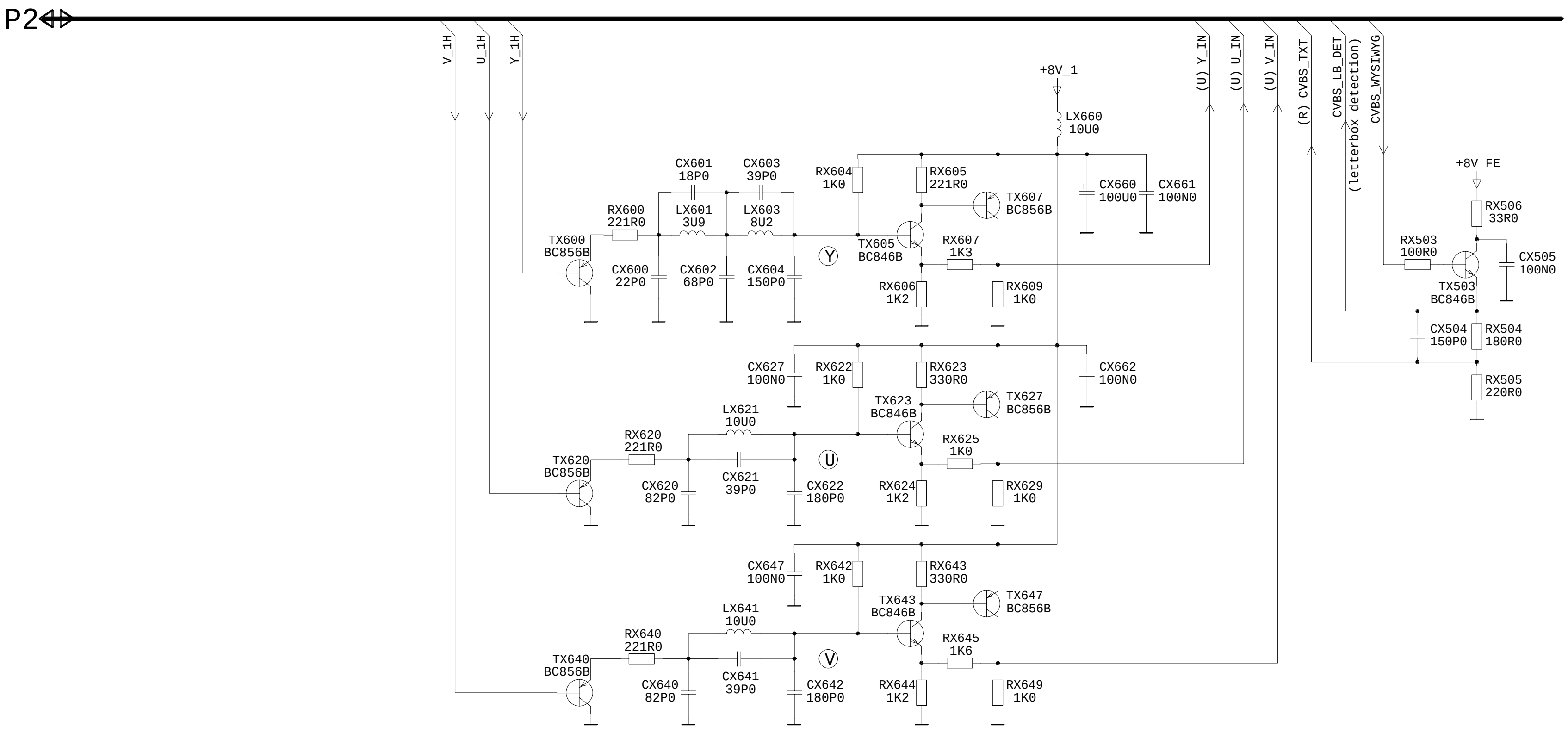
DEVELOPMENT DEPT: CTV_MIKA

INDEX	DATE	NAME	DESCRIPTION
E	07.02.00	RIEDM.	C31330/34500
D	18.11.99	RIEDM.	C28630/29280 690/710 30250/260
H	04.04.00	J.David	C34650
G	31.03.00	J.David	C37700
F	27.03.00	J.David	C37100

DRAWN
ON: 11.03.99
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER		TV
FE.20000.00	10624110	00	IC20
			PAGE: 2
			OF : 3

PCAD FORMAT DIN A1


P2
V_1H
U_1H
Y_1H
(U) Y_IN
(U) U_IN
(U) V_IN
(R) CVBS_TXT
CVBS_LB_DET
(letterbox detection)
CVBS_WYSIWYG
+8V_1
LX660 10U0
CX601 18P0
CX603 39P0
RX600 221R0
LX601 3U9
LX603 8U2
TX600 BC856B
CX600 22P0
CX602 68P0
CX604 150P0
Y
RX604 1K0
RX605 221R0
TX607 BC856B
TX605 BC846B
RX607 1K3
RX606 1K2
RX609 1K0
CX660 100U0
CX661 100N0
+8V_FE
RX506 33R0
RX503 100R0
CX505 100N0
TX503 BC846B
CX504 150P0
RX504 180R0
RX505 220R0
CX627 100N0
RX622 1K0
RX623 330R0
TX627 BC856B
CX662 100N0
TX623 BC846B
LX621 10U0
RX620 221R0
RX625 1K0
TX620 BC856B
U
CX620 82P0
CX621 39P0
CX622 180P0
RX624 1K2
RX629 1K0
CX647 100N0
RX642 1K0
RX643 330R0
TX647 BC856B
TX643 BC846B
LX641 10U0
RX640 221R0
RX645 1K6
TX640 BC856B
V
CX640 82P0
CX641 39P0
CX642 180P0
RX644 1K2
RX649 1K0

THOMSON MULTI MEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CTV_MIKA

INDEX	DATE	NAME	DESCRIPTION
E	07.02.00	RIEDM.	C31330/34500
D	18.11.99	RIEDM.	C28630/29280 690/710 30250/260
H	04.04.00	J.David	C34650
G	31.03.00	J.David	C37700
F	27.03.00	J.David	C37100

DRAWN
ON: 11.03.99
BY: RIEDM.

CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER	
FE.20000.00	10624110	00

TV
IC20
PAGE: 3
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PCAD FORMAT DIN A2

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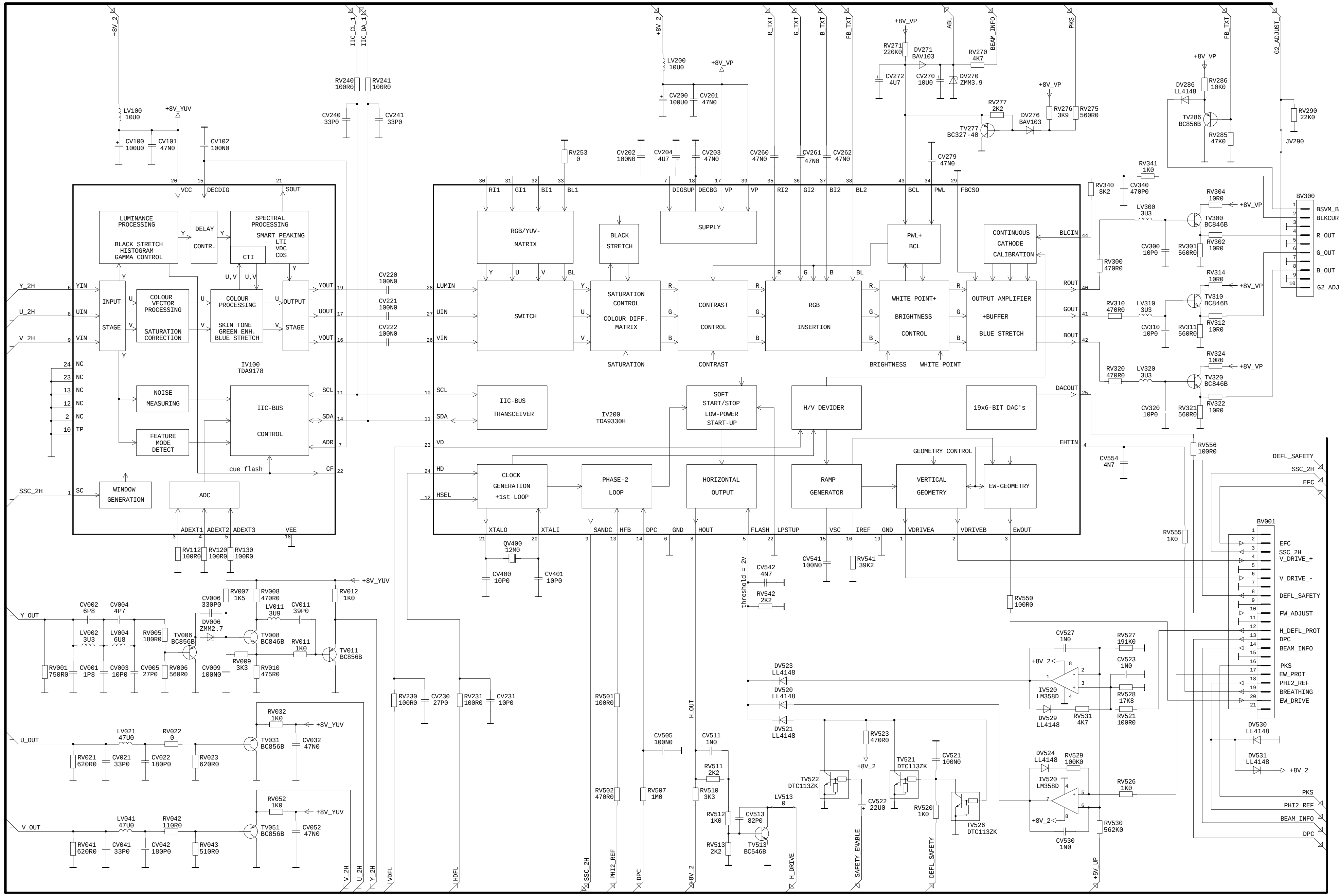
IV100
TDA9178
LUMINANCE PROCESSING
BLACK STRETCH
HISTOGRAM
GAMMA CONTROL
DELAY CONTR.
SPECTRAL PROCESSING
SMART PEAKING
LTI
VDC
CDS
CTI
INPUT STAGE
COLOUR VECTOR PROCESSING
SATURATION CORRECTION
COLOUR PROCESSING
SKIN TONE
GREEN ENH.
BLUE STRETCH
OUTPUT STAGE
NOISE MEASURING
FEATURE MODE DETECT
IIC-BUS CONTROL
cue flash
WINDOW GENERATION
ADC
Y_2H
U_2H
V_2H
SSC_2H
YOUT
UOUT
VOUT
SCL
SDA
ADR
CF
ADEXT1
ADEXT2
ADEXT3
VEE
VCC
DECDIG
SOUT
IV200
TDA9330H
RGB/YUV-MATRIX
BLACK STRETCH
SUPPLY
SWITCH
SATURATION CONTROL
COLOUR DIFF. MATRIX
CONTRAST CONTROL
RGB INSERTION
PWL+ BCL
WHITE POINT+ BRIGHTNESS CONTROL
CONTINUOUS CATHODE CALIBRATION
OUTPUT AMPLIFIER +BUFFER BLUE STRETCH
IIC-BUS TRANSCEIVER
SOFT START/STOP LOW-POWER START-UP
H/V DEVIDER
19x6-BIT DAC's
CLOCK GENERATION +1st LOOP
PHASE-2 LOOP
HORIZONTAL OUTPUT
RAMP GENERATOR
VERTICAL GEOMETRY
EW-GEOMETRY
GEOMETRY CONTROL
SATURATION
CONTRAST
BRIGHTNESS
WHITE POINT
LUMIN
UIN
VIN
VD
HD
HSEL
XTALO
XTALI
SANDC
HFB
DPC
GND
HOUT
FLASH
LPSTUP
VSC
IREF
VDRIVEA
VDRIVEB
EWOUT
EHTIN
DACOUT
BLCIN
ROUT
GOUT
BOUT
RI1
GI1
BI1
BL1
DIGSUP
DECBG
VP
RI2
GI2
BI2
BL2
BCL
PWL
FBCSO
+8V_2
+8V_YUV
+8V_VP
IIC_CL_1
IIC_DA_1
R_TXT
G_TXT
B_TXT
FB_TXT
ABL
BEAM_INFO
PKS
G2_ADJUST
BV300
BSVM_BLANK
BLKCURR
R_OUT
G_OUT
B_OUT
G2_ADJUST
BV001
EFC
SSC_2H
V_DRIVE_+
V_DRIVE_-
DEFL_SAFETY
FW_ADJUST
H_DEFL_PROT
DPC
BEAM_INFO
PKS
EW_PROT
PHI2_REF
BREATHING
EW_DRIVE
IV520
LM358D
TV300 BC846B
TV310 BC846B
TV320 BC846B
TV286 BC856B
TV277 BC327-40
TV006 BC856B
TV008 BC846B
TV011 BC856B
TV031 BC856B
TV051 BC856B
TV513 BC546B
TV521 DTC113ZK
TV522 DTC113ZK
TV526 DTC113ZK
QV400 12M0
threshold = 2V
Y_OUT
U_OUT
V_OUT
V_2H
U_2H
Y_2H
VDFL
HDFL
SSC_2H
PHI2_REF
DPC
+8V_2
H_OUT
H_DRIVE
SAFETY_ENABLE
DEFL_SAFETY
+5V_UP
JV290

J	30.11.99	RIEDM.	C30790/890	
I	17.11.99	RIEDM.	C28630/700 29330/450/460 710	
M	31.03.00	J.David	CORRECTION	
L	30.03.00	J.David	C35790/37270 C37290	
K	25.02.00	RIEDM.	C30940/32640 C34520/880	
INDEX	DATE	NAME	DESCRIPTION	

THOMSON MULTIMEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CTV_LUEBCKE

DRAWN
ON: 04.11.98
BY: RIEDM.

CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER
VP.20000.00	10626010

TV
IC20

PAGE: 1
OF : 1

PCAD FORMAT DIN A1

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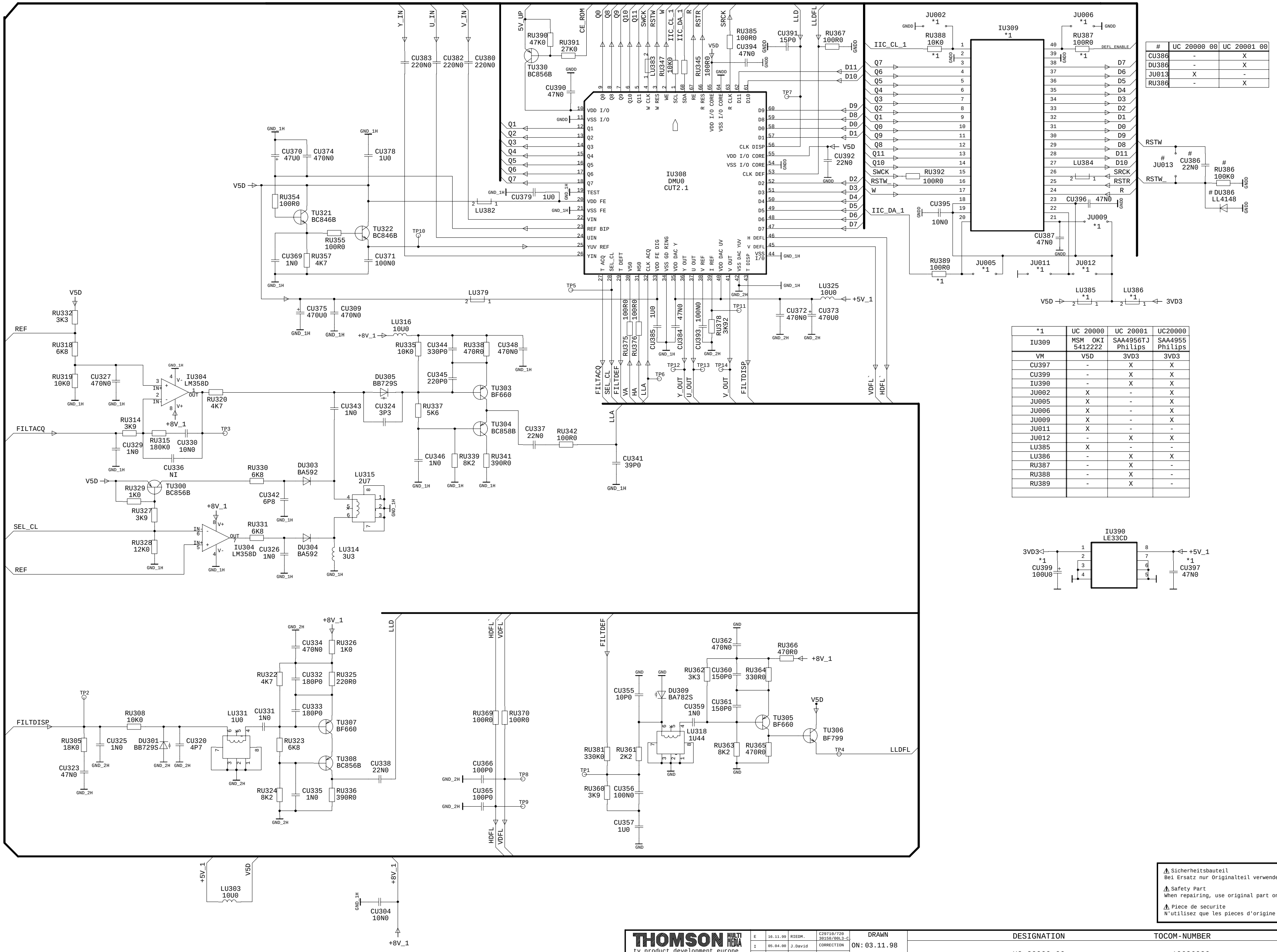
IU308
DMU0
CUT2.1
IU309
*1
IU304
LM358D
IU390
LE33CD
TU330 BC856B
TU321 BC846B
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TU303 BF660
TU304 BC858B
TU300 BC856B
TU307 BF660
TU308 BC856B
TU305 BF660
TU306 BF799
DU305 BB729S
DU303 BA592
DU304 BA592
DU301 BB729S
DU309 BA782S
DU386 LL4148
LU315 2U7
LU314 3U3
LU316 10U0
LU325 10U0
LU331 1U0
LU318 1U44
LU303 10U0
LU379
LU382
LU383
LU384
LU385 *1
LU386 *1
Y_IN
U_IN
V_IN
5V_UP
CE_ROM
SRCK
LLD
LLDFL
IIC_CL_1
IIC_DA_1
RSTW
RSTW_
SWCK
W
R
REF
FILTACQ
SEL_CL
FILTDISP
FILTDEF
VDFL
HDFL
LLA
V5D
+5V_1
+8V_1
3VD3
GND_1H
GND_2H
GNDD
RU390 47K0
RU391 27K0
RU385 100R0
CU394 47N0
CU391 15P0
RU367 100R0
RU388 10K0
RU387 100R0
RU392 100R0
RU389 100R0
RU386 100K0
CU386 22N0
JU013
JU002
JU006
JU005
JU009
JU011
JU012
CU383 220N0
CU382 220N0
CU380 220N0
CU390 47N0
CU370 47U0
CU374 470N0
CU378 1U0
RU354 100R0
RU355 100R0
RU357 4K7
CU369 1N0
CU371 100N0
CU379 1U0
CU375 470U0
CU309 470N0
CU392 22N0
CU395 10N0
CU396 47N0
CU387 47N0
CU372 470N0
CU373 470U0
RU375 100R0
RU376 100R0
CU385 1U0
CU384 47N0
CU393 100N0
RU378 3K92
RU332 3K3
RU318 6K8
RU319 10K0
CU327 470N0
RU320 4K7
RU314 3K9
RU315 180K0
CU329 1N0
CU330 10N0
CU336 NI
RU329 1K0
RU327 3K9
RU328 12K0
RU330 6K8
RU331 6K8
CU342 6P8
CU326 1N0
RU335 10K0
CU344 330P0
RU338 470R0
CU348 470N0
CU345 220P0
CU343 1N0
CU324 3P3
RU337 5K6
CU346 1N0
RU339 8K2
RU341 390R0
CU337 22N0
RU342 100R0
CU341 39P0
CU334 470N0
RU326 1K0
RU322 4K7
CU332 180P0
RU325 220R0
CU333 180P0
RU308 10K0
CU331 1N0
RU323 6K8
RU305 18K0
CU325 1N0
CU320 4P7
CU323 47N0
RU324 8K2
CU335 1N0
RU336 390R0
CU338 22N0
RU369 100R0
RU370 100R0
CU366 100P0
CU365 100P0
CU362 470N0
RU366 470R0
RU362 3K3
CU360 150P0
RU364 330R0
CU355 10P0
CU361 150P0
CU359 1N0
RU381 330K0
RU361 2K2
RU363 8K2
RU365 470R0
RU360 3K9
CU356 100N0
CU357 1U0
CU304 10N0
CU399 100U0
CU397 47N0
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP11
TP12
TP13
TP14

#	UC 20000 00	UC 20001 00
CU386	-	X
DU386	-	X
JU013	X	-
RU386	-	X

*1	UC 20000	UC 20001	UC20000
IU309	MSM OKI 5412222	SAA4956TJ Philips	SAA4955 Philips
VM	V5D	3VD3	3VD3
CU397	-	X	X
CU399	-	X	X
IU390	-	X	X
JU002	X	-	X
JU005	X	-	X
JU006	X	-	X
JU009	X	-	X
JU011	X	-	-
JU012	-	X	X
LU385	X	-	-
LU386	-	X	X
RU387	-	X	-
RU388	-	X	-
RU389	-	X	-

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

THOMSON MULTI MEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CDH_SEEBURGER

INDEX	DATE	NAME	DESCRIPTION
E	16.11.99	RIEDM.	C29710/720 30150/00L3-C.
I	05.04.00	J.David	CORRECTION
H	27.03.00	J.David	C37190
G	09.03.00	RIEDM.	C35590
F	24.02.00	RIEDM.	C30910/33010 34040/34740

DRAWN
ON: 03.11.98
BY: RIEDM.

CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER	
UC.20000.00	10626020	00
UC.20001.00	10649920	

TV
IC20
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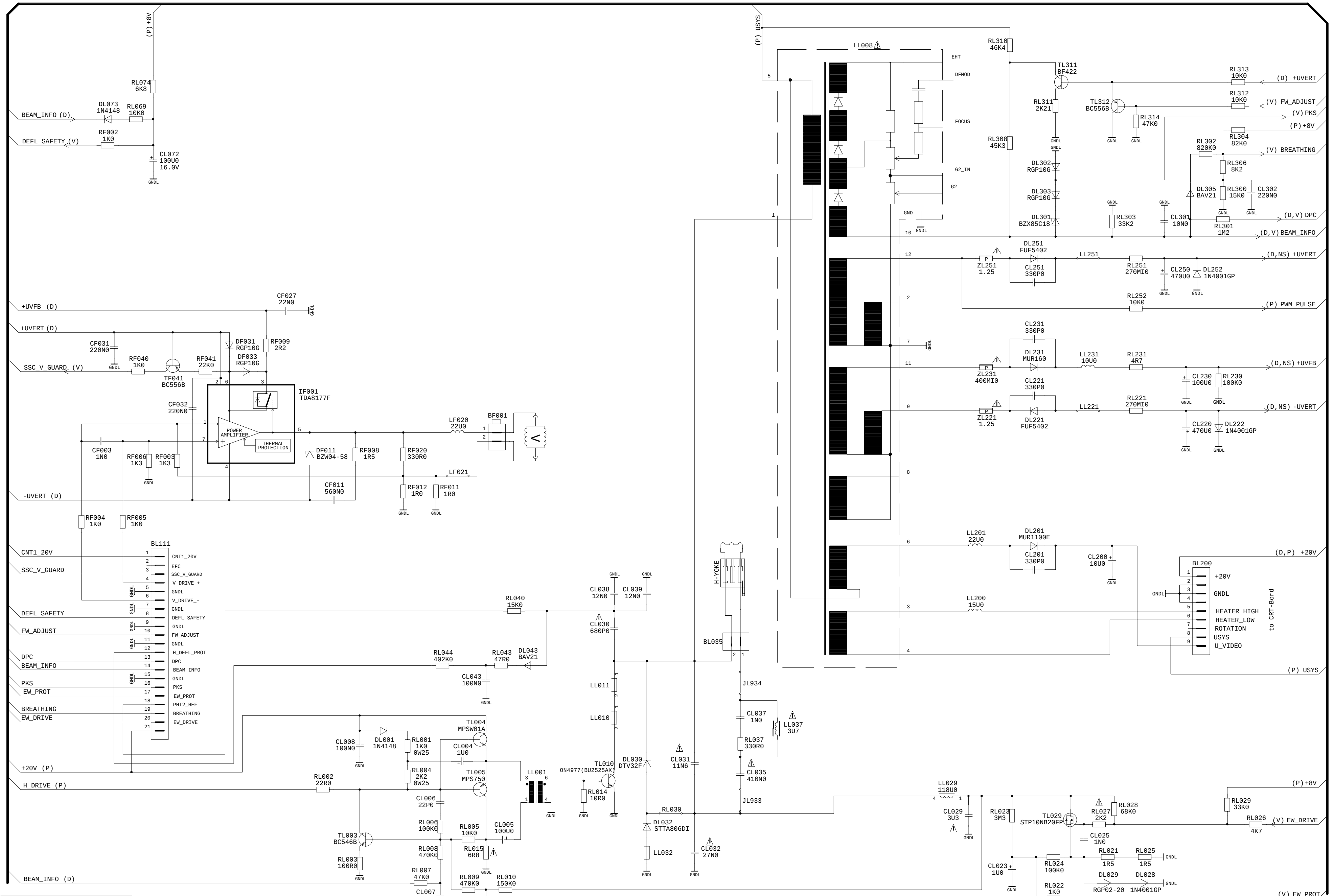
PCAD FORMAT DIN A1



(P) +8V
RL074 6K8
DL073 1N4148
RL069 10K0
BEAM_INFO (D)
RF002 1K0
DEFL_SAFETY (V)
CL072 100U0 16.0V
GNDL
(P) USYS
LL008
EHT
DFMOD
FOCUS
G2_IN
G2
GND
RL310 46K4
TL311 BF422
RL313 10K0
(D) +UVERT
RL311 2K21
TL312 BC556B
RL312 10K0
(V) FW_ADJUST
(V) PKS
RL314 47K0
(P) +8V
RL308 45K3
RL304 82K0
RL302 820K0
(V) BREATHING
DL302 RGP10G
RL306 8K2
DL303 RGP10G
DL305 BAV21
RL300 15K0
CL302 220N0
DL301 BZX85C18
RL303 33K2
CL301 10N0
RL301 1M2
(D,V) DPC
(D,V) BEAM_INFO
DL251 FUF5402
ZL251 1.25
CL251 330P0
LL251
RL251 270MI0
CL250 470U0
DL252 1N4001GP
(D,NS) +UVERT
RL252 10K0
(P) PWM_PULSE
CL231 330P0
DL231 MUR160
LL231 10U0
RL231 4R7
ZL231 400MI0
CL230 100U0
RL230 100K0
(D,NS) +UVFB
CL221 330P0
DL221 FUF5402
ZL221 1.25
LL221
RL221 270MI0
CL220 470U0
DL222 1N4001GP
(D,NS) -UVERT
+UVFB (D)
CF027 22N0
+UVERT (D)
CF031 220N0
DF031 RGP10G
RF009 2R2
DF033 RGP10G
SSC_V_GUARD (V)
RF040 1K0
TF041 BC556B
RF041 22K0
IF001 TDA8177F
POWER AMPLIFIER
THERMAL PROTECTION
CF032 220N0
CF003 1N0
RF006 1K3
RF003 1K3
DF011 BZW04-58
RF008 1R5
RF020 330R0
LF020 22U0
BF001
LF021
RF012 1R0
RF011 1R0
CF011 560N0
-UVERT (D)
RF004 1K0
RF005 1K0
BL111
CNT1_20V
EFC
SSC_V_GUARD
V_DRIVE_+
V_DRIVE_-
DEFL_SAFETY
FW_ADJUST
H_DEFL_PROT
DPC
BEAM_INFO
PKS
EW_PROT
PHI2_REF
BREATHING
EW_DRIVE
+20V (P)
H_DRIVE (P)
LL201 22U0
DL201 MUR1100E
CL201 330P0
CL200 10U0
BL200
(D,P) +20V
+20V
GNDL
HEATER_HIGH
HEATER_LOW
ROTATION
USYS
U_VIDEO
to CRT-Bord
LL200 15U0
(P) USYS
H-YOKE
BL035
RL040 15K0
CL038 12N0
CL039 12N0
CL030 680P0
RL044 402K0
RL043 47R0
DL043 BAV21
CL043 100N0
LL011
LL010
JL934
CL037 1N0
LL037 3U7
RL037 330R0
CL035 410N0
JL933
CL008 100N0
DL001 1N4148
RL001 1K0 0W25
TL004 MPSW01A
CL004 1U0
RL004 2K2 0W25
TL005 MPS750
LL001
TL010 ON4977(BU2525AX)
RL014 10R0
DL030 DTV32F
CL031 11N6
RL002 22R0
CL006 22P0
RL006 100K0
RL005 10K0
CL005 100U0
TL003 BC546B
RL008 470K0
RL015 6R8
RL003 100R0
RL007 47K0
CL007 3N3
RL009 470K0
RL010 150K0
CL010 100N0
RL030
DL032 STTA806DI
LL032
CL032 27N0
LL029 118U0
(P) +8V
CL029 3U3
RL023 3M3
TL029 STP10NB20FP
RL027 2K2
RL028 68K0
RL029 33K0
RL026 4K7
(V) EW_DRIVE
CL025 1N0
RL021 1R5
RL025 1R5
CL023 1U0
RL024 100K0
DL029 RGP02-20
DL028 1N4001GP
RL022 1K0
(V) EW_PROT

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

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THOMSON MULTI MEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CLT_LAEUFER

INDEX	DATE	NAME	DESCRIPTION
J	07.02.00	RIEDM.	C32460/33040 130/720/760
I	30.11.99	RIEDM.	C28630/29450 60/890/31310
H	18.10.99	RIEDM.	C28140
G	22.09.99	RIEDM.	CORRECTION
K	30.03.00	J.David	C35790/36340 C36360/560 C36920/37290

DRAWN
ON: 28.04.99
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER		TV
DP.20100.34	10626050	00	IC20
			PAGE: 1
			OF : 1

PCAD FORMAT DIN A1

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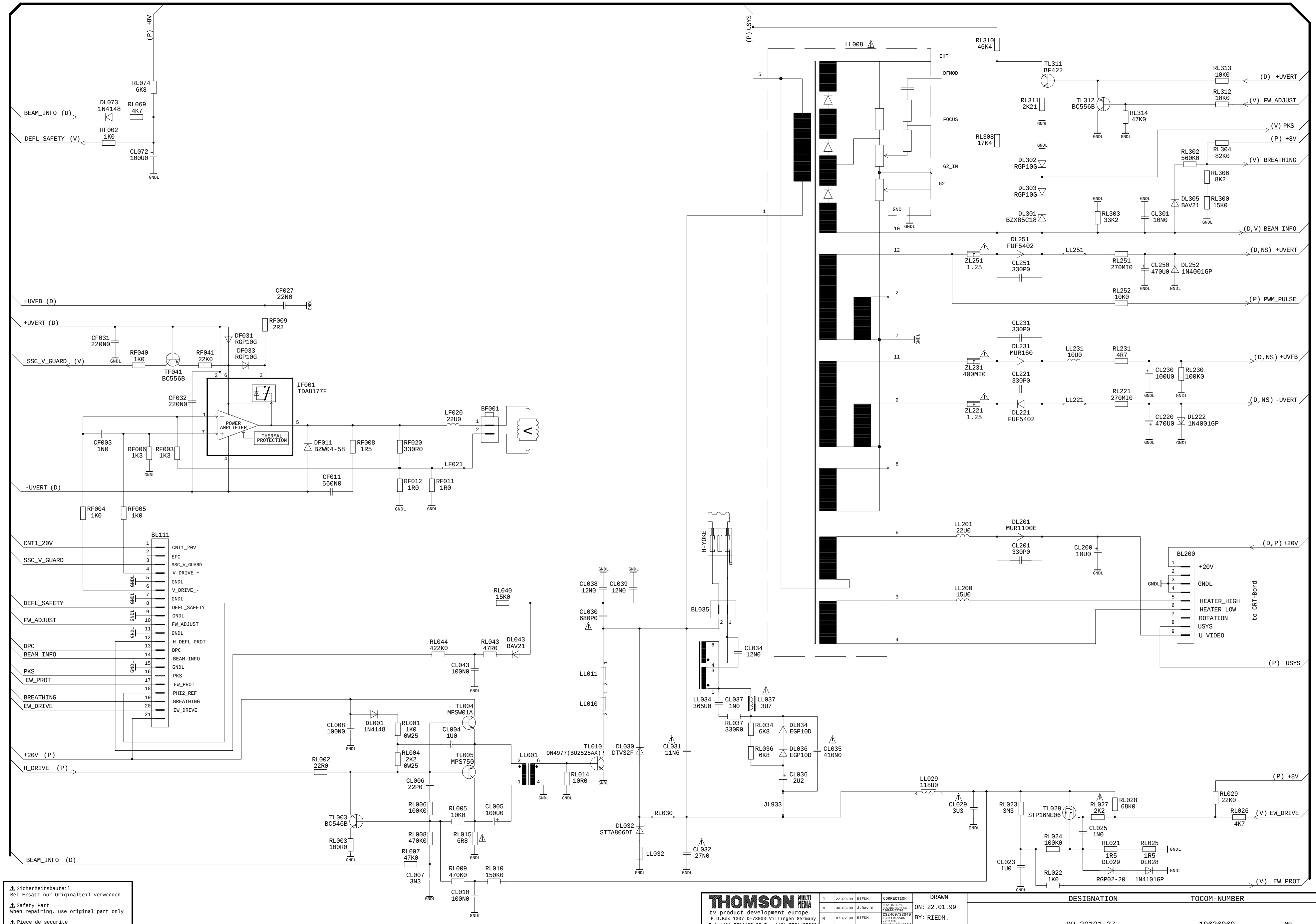

(P) +8V
RL074 6K8
DL073 1N4148
RL069 4K7
BEAM_INFO (D)
RF002 1K0
DEFL_SAFETY (V)
CL072 100U0
GNDL
+UVFB (D)
CF027 22N0
+UVERT (D)
RF009 2R2
CF031 220N0
DF031 RGP10G
DF033 RGP10G
SSC_V_GUARD (V)
RF040 1K0
TF041 BC556B
RF041 22K0
IF001 TDA8177F
POWER AMPLIFIER
THERMAL PROTECTION
CF032 220N0
CF003 1N0
RF006 1K3
RF003 1K3
DF011 BZW04-58
RF008 1R5
RF020 330R0
LF020 22U0
BF001
LF021
RF012 1R0
RF011 1R0
CF011 560N0
-UVERT (D)
RF004 1K0
RF005 1K0
BL111
CNT1_20V
SSC_V_GUARD
EFC
V_DRIVE_+
V_DRIVE_-
DEFL_SAFETY
FW_ADJUST
H_DEFL_PROT
DPC
BEAM_INFO
PKS
EW_PROT
PHI2_REF
BREATHING
EW_DRIVE
+20V (P)
H_DRIVE (P)
RF002 22R0
TL003 BC546B
RL003 100R0
RL007 47K0
CL007 3N3
CL008 100N0
DL001 1N4148
RL001 1K0 0W25
RL004 2K2 0W25
TL004 MPSW01A
CL004 1U0
TL005 MPS750
CL006 22P0
RL006 100K0
RL005 10K0
CL005 100U0
RL008 470K0
RL015 6R8
RL009 470K0
RL010 150K0
CL010 100N0
RL040 15K0
RL044 422K0
RL043 47R0
DL043 BAV21
CL043 100N0
LL001
TL010 ON4977(BU2525AX)
RL014 10R0
CL038 12N0
CL039 12N0
CL030 680P0
LL011
LL010
DL030 DTV32F
CL031 11N6
RL030
DL032 STTA806DI
LL032
CL032 27N0
H-YOKE
BL035
CL034 12N0
LL034 365U0
CL037 1N0
LL037 3U7
RL037 330R0
RL034 6K8
RL036 6K8
DL034 EGP10D
DL036 EGP10D
CL035 410N0
CL036 2U2
JL933
LL029 118U0
CL029 3U3
RL023 3M3
TL029 STP16NE06
RL027 2K2
RL028 68K0
CL025 1N0
RL024 100K0
RL021 1R5
RL025 1R5
DL029 RGP02-20
DL028 1N4101GP
CL023 1U0
RL022 1K0
RL029 22K0
RL026 4K7
(P) +8V
(V) EW_DRIVE
(V) EW_PROT
(P) USYS
LL008
EHT
DFMOD
FOCUS
G2_IN
G2
GND
RL310 46K4
TL311 BF422
RL311 2K21
TL312 BC556B
RL314 47K0
RL308 17K4
DL302 RGP10G
DL303 RGP10G
DL301 BZX85C18
RL303 33K2
CL301 10N0
RL313 10K0
(D) +UVERT
RL312 10K0
(V) FW_ADJUST
(V) PKS
(P) +8V
RL304 82K0
RL302 560K0
(V) BREATHING
RL306 8K2
DL305 BAV21
RL300 15K0
(D,V) BEAM_INFO
ZL251 1.25
DL251 FUF5402
CL251 330P0
LL251
RL251 270MI0
CL250 470U0
DL252 1N4001GP
(D,NS) +UVERT
RL252 10K0
(P) PWM_PULSE
CL231 330P0
DL231 MUR160
ZL231 400MI0
LL231 10U0
RL231 4R7
CL230 100U0
RL230 100K0
(D,NS) +UVFB
CL221 330P0
ZL221 1.25
DL221 FUF5402
LL221
RL221 270MI0
CL220 470U0
DL222 1N4001GP
(D,NS) -UVERT
LL201 22U0
DL201 MUR1100E
CL201 330P0
CL200 10U0
(D,P) +20V
LL200 15U0
BL200
+20V
GNDL
HEATER_HIGH
HEATER_LOW
ROTATION
USYS
U_VIDEO
to CRT-Bord
(P) USYS

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

THOMSON MULTI MEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CLT_LAEUFER

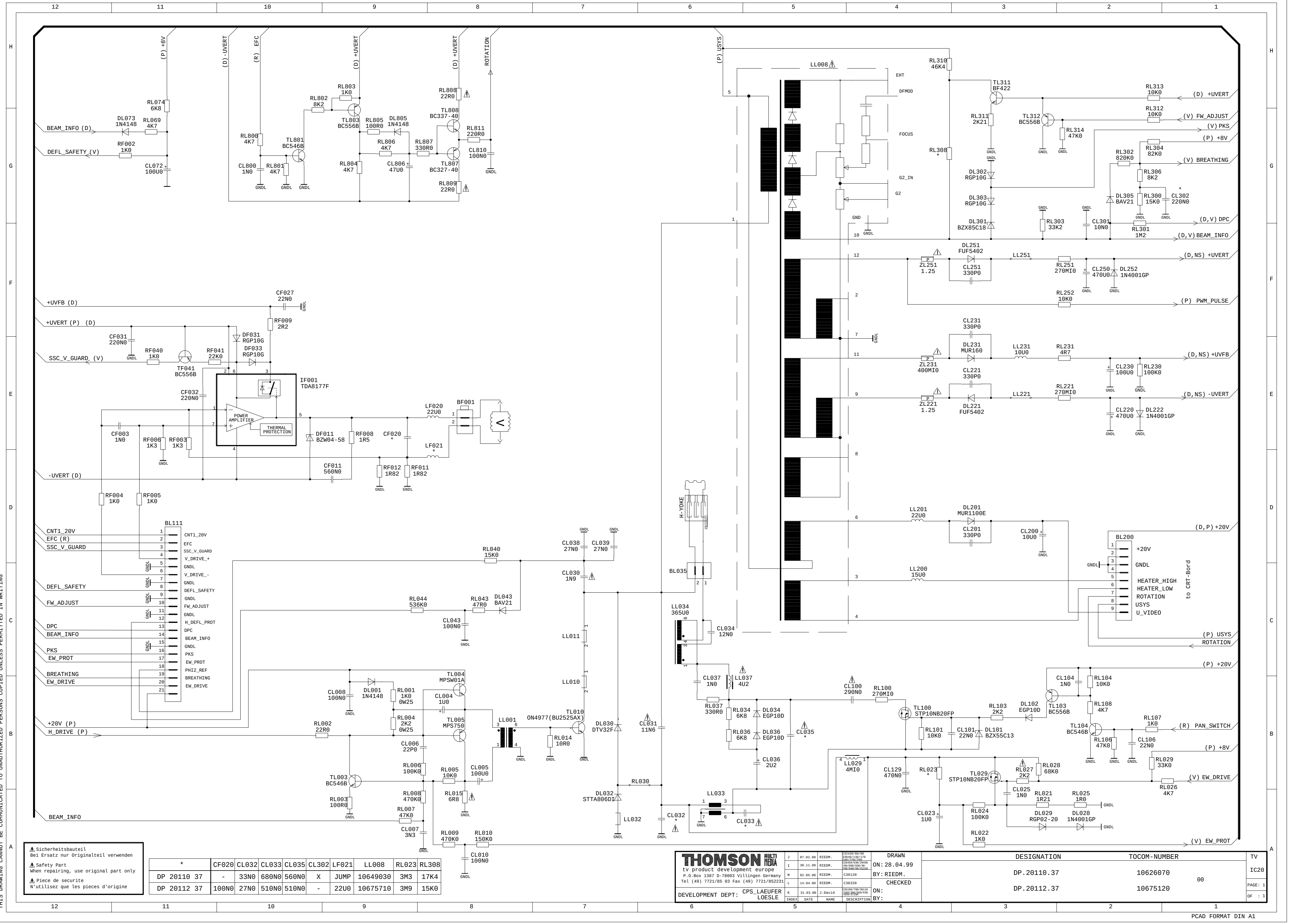
INDEX	DATE	NAME	DESCRIPTION
J	22.09.99	RIEDM.	CORRECTION
N	30.03.00	J.David	C35190/35790 C35340/60/36560 C36920/37290
M	07.02.00	RIEDM.	C32460/33040 130/170/240/ 720/760
L	30.11.99	RIEDM.	C28630/29440 50/60/890/30750 /940/50/31310
K	18.10.99	RIEDM.	C28140

DRAWN
ON: 22.01.99
BY: RIEDM.

CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER		TV
DP.20101.37	10626060	00	IC20
			PAGE: 1
			OF : 1

PCAD FORMAT DIN A1


(P) +8V
(D)-UVERT
(R) EFC
(D) +UVERT
ROTATION
(P) USYS
BEAM_INFO (D)
DEFL_SAFETY (V)
+UVFB (D)
+UVERT (P) (D)
SSC_V_GUARD (V)
-UVERT (D)
IF001
TDA8177F
POWER AMPLIFIER
THERMAL PROTECTION
BF001
BL111
CNT1_20V
EFC (R)
SSC_V_GUARD
V_DRIVE_+
V_DRIVE_-
DEFL_SAFETY
FW_ADJUST
H_DEFL_PROT
DPC
BEAM_INFO
PKS
EW_PROT
PHI2_REF
BREATHING
EW_DRIVE
+20V (P)
H_DRIVE (P)
LL008
EHT
DFMOD
FOCUS
G2_IN
G2
GND
H-YOKE
BL035
TL010
ON4977(BU2525AX)
LL001
TL004
MPSW01A
TL005
MPS750
TL003
BC546B
LL034
365U0
LL033
TL100
STP10NB20FP
TL029
STP10NB20FP
TL103
BC556B
TL104
BC546B
TL311
BF422
TL312
BC556B
(D) +UVERT
(V) FW_ADJUST
(V) PKS
(P) +8V
(V) BREATHING
(D,V) DPC
(D,V) BEAM_INFO
(D,NS) +UVERT
(P) PWM_PULSE
(D,NS) +UVFB
(D,NS) -UVERT
(D,P) +20V
BL200
+20V
GNDL
HEATER_HIGH
HEATER_LOW
ROTATION
USYS
U_VIDEO
to CRT-Bord
(P) USYS
ROTATION
(P) +20V
(R) PAN_SWITCH
(P) +8V
(V) EW_DRIVE
(V) EW_PROT
PCAD FORMAT DIN A1

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*	CF020	CL032	CL033	CL035	CL302	LF021	LL008	RL023	RL308
DP 20110 37	-	33N0	680N0	560N0	X	JUMP	10649030	3M3	17K4
DP 20112 37	100N0	27N0	510N0	510N0	-	22U0	10675710	3M9	15K0

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P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CPS_LAEUFER LOESLE

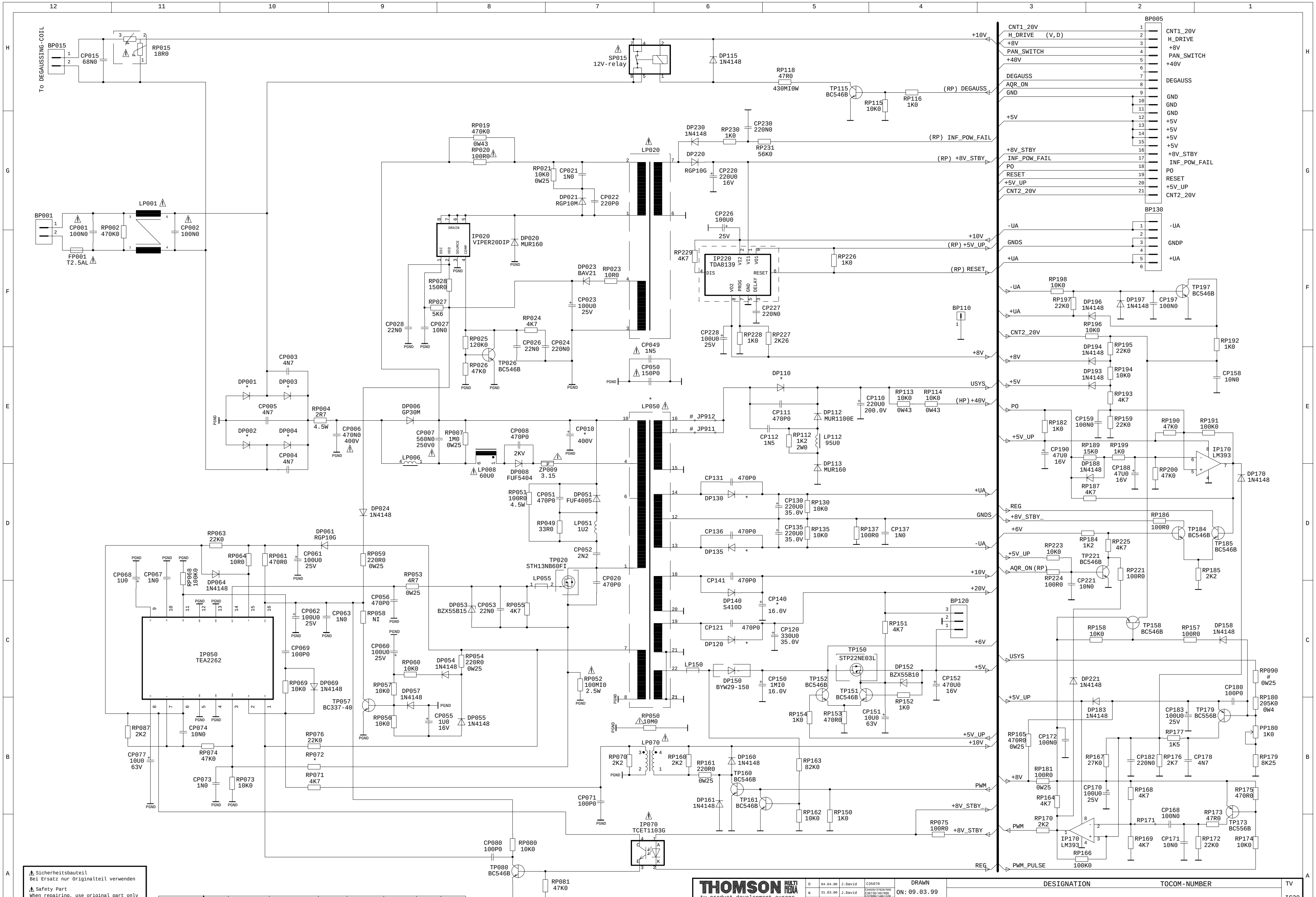
INDEX	DATE	NAME	DESCRIPTION
J	07.02.00	RIEDM.	C32420/60/90 33040/130/170 240/720/760
I	30.11.99	RIEDM.	C28450/630/29450 /60/890/930/30- 750/940/50/31310
M	02.05.00	RIEDM.	C39120
L	14.04.00	RIEDM.	C38320
K	31.03.00	J.David	C35190/790/36110 /340/360/560/630 /920/37290

DRAWN
ON: 28.04.99
BY: RIEDM.

CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER	
DP.20110.37	10626070	00
DP.20112.37	10675120	

TV
IC20
PAGE: 1
OF : 1


To DEGAUSSING-COIL
BP015
CP015 68N0
RP015 18R0
SP015 12V-relay
DP115 1N4148
RP118 47R0 430MI0W
TP115 BC546B
RP115 10K0
RP116 1K0
(RP) DEGAUSS
BP001
CP001 100N0
RP002 470K0
LP001
CP002 100N0
FP001 T2.5AL
RP019 470K0 0W43
RP020 100R0
RP021 10K0 0W25
CP021 1N0
DP021 RGP10M
CP022 220P0
IP020 VIPER20DIP
DP020 MUR160
LP020
DP230 1N4148
RP230 1K0
CP230 220N0
RP231 56K0
(RP) INF_POW_FAIL
DP220 RGP10G
CP220 220U0 16V
(RP) +8V_STBY
CP226 100U0 25V
RP229 4K7
IP220 TDA8139
RP226 1K0
(RP) +5V_UP
(RP) RESET
CP227 220N0
CP228 100U0 25V
RP228 1K0
RP227 2K26
RP028 150R0
RP027 5K6
CP028 22N0
CP027 10N0
DP023 BAV21
RP023 10R0
CP023 100U0 25V
RP024 4K7
RP025 120K0
RP026 47K0
TP026 BC546B
CP026 22N0
CP024 220N0
CP049 1N5
CP050 150P0
BP110
+8V
BP005
CNT1_20V
H_DRIVE (V,D)
+8V
PAN_SWITCH
+40V
DEGAUSS
AQR_ON
GND
+5V
+8V_STBY
INF_POW_FAIL
PO
RESET
+5V_UP
CNT2_20V
BP130
-UA
GNDS
+UA
GNDP
RP198 10K0
RP197 22K0
DP196 1N4148
DP197 1N4148
CP197 100N0
TP197 BC546B
RP196 10K0
DP194 1N4148
RP195 22K0
RP192 1K0
DP193 1N4148
RP194 10K0
CP158 10N0
RP193 4K7
CP003 4N7
DP001
DP003
CP005 4N7
RP004 2R7 4.5W
CP006 470N0 400V
DP002
DP004
CP004 4N7
DP006 GP30M
CP007 560N0 250V0
RP007 1M0 0W25
CP008 470P0 2KV
CP010 400V
LP006
LP008 60U0
DP008 FUF5404
ZP009 3.15
DP110
CP111 470P0
DP112 MUR1100E
CP110 220U0 200.0V
RP113 10K0 0W43
RP114 10K0 0W43
USYS
(HP)+40V
LP050
# JP912
# JP911
CP112 1N5
RP112 1K2 2W0
LP112 95U0
DP113 MUR160
RP182 1K0
CP159 100N0
RP159 22K0
RP190 47K0
RP191 100K0
IP170 LM393
CP190 47U0 16V
RP189 15K0
RP199 1K0
DP188 1N4148
CP188 47U0 16V
RP200 47K0
RP187 4K7
DP170 1N4148
DP024 1N4148
RP051 100R0 4.5W
CP051 470P0
DP051 FUF4005
RP049 33R0
LP051 1U2
CP131 470P0
DP130
CP130 220U0 35.0V
RP130 10K0
+UA
GNDS
CP136 470P0
DP135
CP135 220U0 35.0V
RP135 10K0
RP137 100R0
CP137 1N0
-UA
REG
+8V_STBY_
+6V
RP186 100R0
TP184 BC546B
TP185 BC556B
RP184 1K2
RP225 4K7
RP223 10K0
TP221 BC546B
RP221 100R0
RP224 100R0
CP221 10N0
RP185 2K2
RP063 22K0
DP061 RGP10G
RP064 10R0
RP061 470R0
CP061 100U0 25V
RP059 220R0 0W25
CP068 1U0
CP067 1N0
RP068 100K0
DP064 1N4148
CP052 2N2
TP020 STH13NB60FI
RP053 4R7 0W25
LP055
CP020 470P0
CP141 470P0
DP140 S410D
CP140 16.0V
+10V
+20V
BP120
RP151 4K7
CP121 470P0
DP120
CP120 330U0 35.0V
IP050 TEA2262
CP062 100U0 25V
CP063 1N0
CP056 470P0
RP058 NI
DP053 BZX55B15
CP053 22N0
RP055 4K7
CP069 100P0
RP069 10K0
DP069 1N4148
CP060 100U0 25V
RP060 10K0
DP054 1N4148
RP054 220R0 0W25
RP057 10K0
DP057 1N4148
TP057 BC337-40
RP056 10K0
CP055 1U0 16V
DP055 1N4148
RP052 100MI0 2.5W
LP150
DP150 BYW29-150
CP150 1MI0 16.0V
TP150 STP22NE03L
DP152 BZX55B10
CP152 470U0 16V
TP152 BC546B
TP151 BC546B
RP152 1K0
RP154 1K0
RP153 470R0
CP151 10U0 63V
DP221 1N4148
RP158 10K0
TP158 BC546B
RP157 100R0
DP158 1N4148
RP090 0W25
CP180 100P0
RP180 205K0 0W4
DP183 1N4148
CP183 100U0 25V
TP179 BC556B
RP180 1K0
RP165 470R0 0W25
CP172 100N0
RP177 1K5
RP167 27K0
CP182 220N0
RP176 2K7
CP178 4N7
RP179 8K25
RP087 2K2
CP074 10N0
RP074 47K0
CP077 10U0 63V
RP076 22K0
RP072
RP071 4K7
CP073 1N0
RP073 10K0
RP050 10M0
LP070
RP070 2K2
RP160 2K2
RP161 220R0 0W25
DP160 1N4148
TP160 BC546B
DP161 1N4148
TP161 BC546B
RP163 82K0
RP162 10K0
RP150 1K0
CP071 100P0
PWM
+8V_STBY
RP075 100R0
RP181 100R0 0W25
CP170 100U0 25V
RP164 4K7
RP168 4K7
CP168 100N0
RP171
RP175 470R0
RP173 47R0
TP173 BC556B
RP170 2K2
RP169 4K7
CP171 10N0
RP172 22K0
RP174 10K0
RP166 100K0
PWM_PULSE
IP070 TCET1103G
CP080 100P0
RP080 10K0
TP080 BC546B
RP081 47K0
PGND

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

*	CP010	DP001-004	DP110	DP120	DP130+135	LP050	RP072	CP140
PP 20000 00	220U0	GP20M	RGP50M	RGP15G	RGP15G	10670390	3K3	1MI0
PP 20100 00	390U0	GP30M	BYT08PI-1000	S410D	MUR420	10643540	5K6	4MI7

# = value see DP 2.... partlists

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P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CPS_RIEDLINGER ELGERT

INDEX	DATE	NAME	DESCRIPTION
O	04.04.00	J.David	C35070
N	31.03.00	J.David	C34920/37620/850 C36730/40/900 C37000/140/220
M	07.02.00	RIEDM.	C31320/32010/40 210/490/33140/ 660/830/950
L	29.11.99	RIEDM.	C30760
K	18.11.99	RIEDM.	C28800/910/29- 600/850/30020 140/240/610

DRAWN
ON: 09.03.99
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER	
PP.20000.00	10626080	00
PP.20100.00	10626090	

TV
IC20
PAGE: 1
OF : 1

PCAD FORMAT DIN A1

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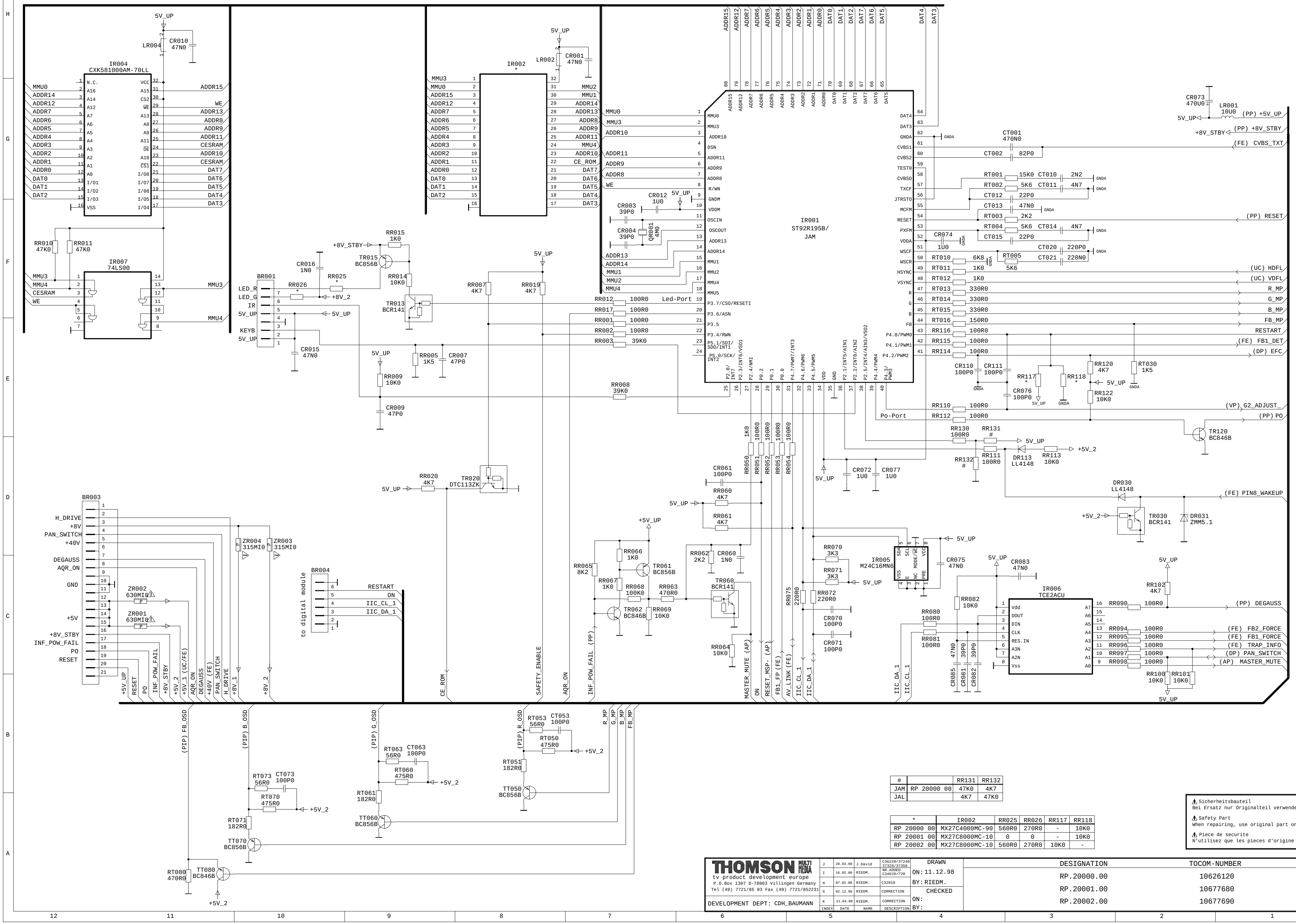
12
11
10
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8
7
6
5
4
3
2
1
H
G
F
E
D
C
B
A
IR004
CXK581000AM-70LL
IR002
*
IR001
ST92R195B/
JAM
IR007
74LS00
IR005
M24C16MN6
IR006
TCE2ACU
5V_UP
LR004
CR010
47N0
LR002
CR001
47N0
CR073
470U0
LR001
10U0
(PP) +5V_UP
(PP) +8V_STBY
(FE) CVBS_TXT
(PP) RESET
(UC) HDFL
(UC) VDFL
R_MP
G_MP
B_MP
FB_MP
RESTART
(FE) FB1_DET
(DP) EFC
(VP) G2_ADJUST_
(PP) PO
(FE) PIN8_WAKEUP
(PP) DEGAUSS
(FE) FB2_FORCE
(FE) FB1_FORCE
(FE) TRAP_INFO
(DP) PAN_SWITCH
(AP) MASTER_MUTE
MMU0
MMU3
MMU4
ADDR15
ADDR14
ADDR13
ADDR12
ADDR11
ADDR10
ADDR9
ADDR8
ADDR7
ADDR6
ADDR5
ADDR4
ADDR3
ADDR2
ADDR1
ADDR0
DAT0
DAT1
DAT2
DAT3
DAT4
DAT5
DAT6
DAT7
WE
CESRAM
CE_ROM
Led-Port
Po-Port
RR010
47K0
RR011
47K0
BR001
LED_R
LED_G
IR
5V_UP
KEYB
RR026
RR025
CR016
1N0
TR015
BC856B
RR015
1K0
+8V_STBY
RR014
10K0
TR013
BCR141
+8V_2
CR015
47N0
RR005
1K5
CR007
47P0
RR009
10K0
CR009
47P0
RR007
4K7
RR019
4K7
RR012
100R0
RR017
100R0
RR001
100R0
RR002
100R0
RR003
39K0
RR008
39K0
CR003
39P0
CR004
39P0
QR001
4M0
CR012
1U0
RR020
4K7
TR020
DTC113ZK
5V_UP
CT001
470N0
CT002
82P0
RT001
15K0
CT010
2N2
RT002
5K6
CT011
4N7
CT012
22P0
CT013
47N0
RT003
2K2
RT004
5K6
CT014
4N7
CT015
22P0
CR074
1U0
CT020
220P0
RT005
5K6
CT021
220N0
RT010
6K8
RT011
1K0
RT012
1K0
RT013
330R0
RT014
330R0
RT015
330R0
RT016
150R0
RR116
100R0
RR115
100R0
RR114
100R0
CR110
100P0
CR111
100P0
CR076
100P0
RR117
RR118
RR120
4K7
RR122
10K0
RT030
1K5
RR110
100R0
RR112
100R0
TR120
BC846B
RR130
100R0
RR131
#
RR132
#
RR111
100R0
DR113
LL4148
RR113
10K0
+5V_2
DR030
LL4148
TR030
BCR141
DR031
ZMM5.1
RR050
1K0
RR051
100R0
RR052
100R0
RR053
100R0
RR054
100R0
CR061
100P0
CR072
1U0
CR077
1U0
RR060
4K7
RR061
4K7
RR062
2K2
CR060
1N0
RR070
3K3
RR071
3K3
CR075
47N0
RR065
8K2
RR066
1K0
TR061
BC856B
RR067
1K0
RR068
100K0
RR063
470R0
TR062
BC846B
RR069
10K0
TR060
BCR141
RR064
10K0
RR075
220R0
RR072
220R0
CR070
100P0
CR071
100P0
CR083
47N0
RR082
10K0
RR080
100R0
RR081
100R0
CR085
47N0
CR081
39P0
CR082
39P0
RR090
100R0
RR094
100R0
RR095
100R0
RR096
100R0
RR097
100R0
RR098
100R0
RR102
4K7
RR100
10K0
RR101
10K0
BR003
H_DRIVE
+8V
PAN_SWITCH
+40V
DEGAUSS
AQR_ON
GND
+5V
+8V_STBY
INF_POW_FAIL
PO
RESET
ZR002
630MI0
ZR001
630MI0
ZR004
315MI0
ZR003
315MI0
BR004
RESTART
ON
IIC_CL_1
IIC_DA_1
to digital module
+5V_UP
+8V_STBY
+5V_2
+5V_1 (UC/FE)
AQR_ON
DEGAUSS
+40V (FE)
PAN_SWITCH
H_DRIVE
+8V_1
+8V_2
CE_ROM
SAFETY_ENABLE
AQR_ON
INF_POW_FAIL (PP)
MASTER_MUTE (AP)
ON
RESET_MSP- (AP)
FB1_FP (FE)
AV_LINK (FE)
IIC_CL_1
IIC_DA_1
(PIP) FB_OSD
(PIP) B_OSD
(PIP) G_OSD
(PIP) R_OSD
R_MP
G_MP
B_MP
FB_MP
RT073
56R0
CT073
100P0
RT070
475R0
RT071
182R0
TT070
BC856B
RT080
470R0
TT080
BC846B
RT063
56R0
CT063
100P0
RT060
475R0
RT061
182R0
TT060
BC856B
RT053
56R0
CT053
100P0
RT050
475R0
RT051
182R0
TT050
BC856B
GNDA

#		RR131	RR132
JAM	RP 20000 00	47K0	4K7
JAL		4K7	47K0

*	IR002	RR025	RR026	RR117	RR118
RP 20000 00	MX27C4000MC-90	560R0	270R0	-	10K0
RP 20001 00	MX27C8000MC-10	0	0	-	10K0
RP 20002 00	MX27C8000MC-10	560R0	270R0	10K0	-

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

THOMSON MULTI MEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CDH_BAUMANN

INDEX	DATE	NAME	DESCRIPTION
J	28.03.00	J.David	C36220/37240 37320/37350
I	16.02.00	RIEDM.	NR.ADDED C34620/720
H	07.02.00	RIEDM.	C32010
G	02.12.99	RIEDM.	CORRECTION
K	11.04.00	RIEDM.	CORRECTION

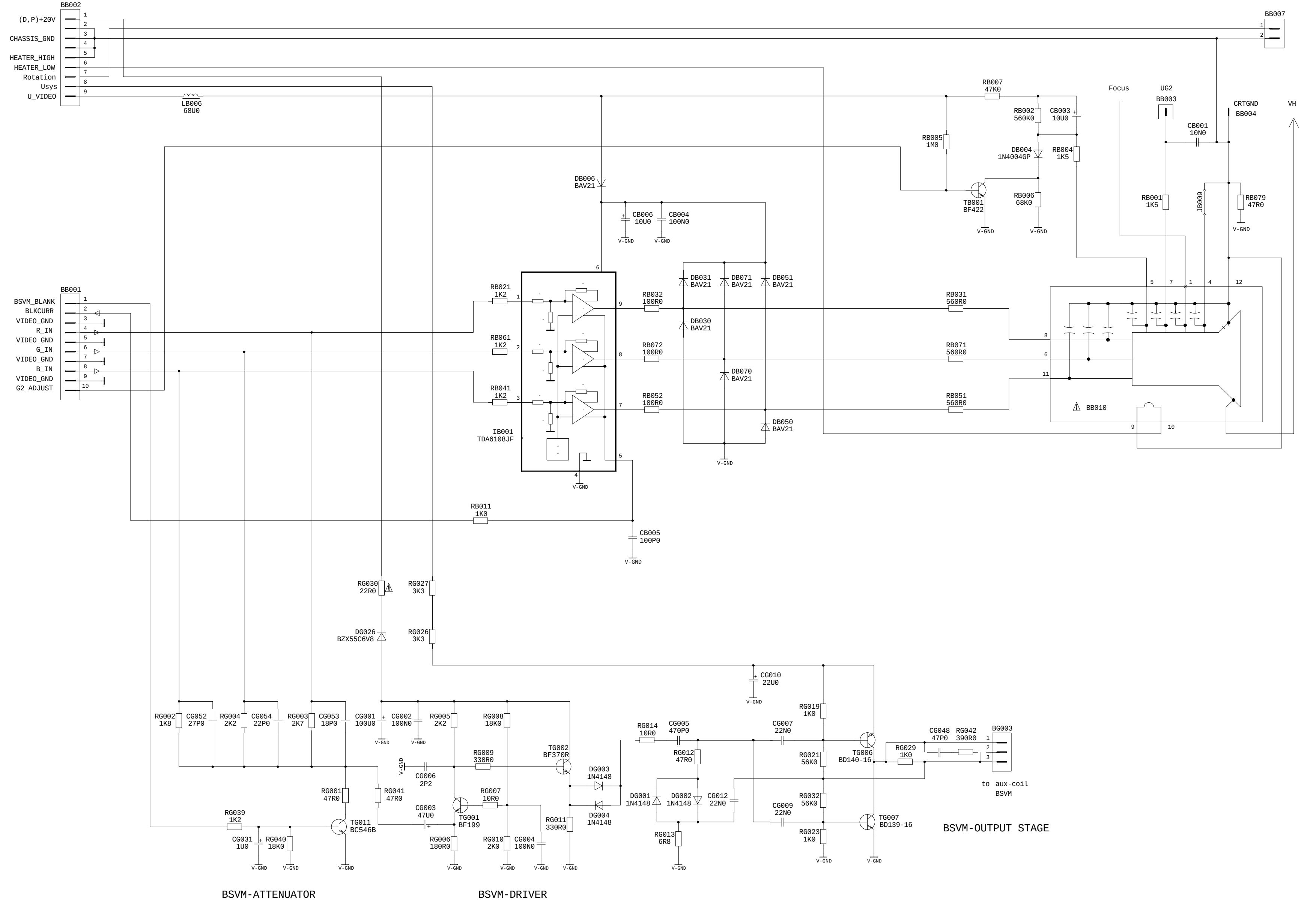
DRAWN
ON: 11.12.98
BY: RIEDM.

CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER
RP.20000.00	10626120
RP.20001.00	10677680
RP.20002.00	10677690

TV
IC20
PAGE: 1
OF : 1

PCAD FORMAT DIN A1


BB002
(D,P)+20V
CHASSIS_GND
HEATER_HIGH
HEATER_LOW
Rotation
Usys
U_VIDEO
LB006
68U0
BB007
BB001
BSVM_BLANK
BLKCURR
VIDEO_GND
R_IN
VIDEO_GND
G_IN
VIDEO_GND
B_IN
VIDEO_GND
G2_ADJUST
RB007
47K0
RB002
560K0
CB003
10U0
RB005
1M0
DB004
1N4004GP
RB004
1K5
TB001
BF422
RB006
68K0
Focus
UG2
BB003
CRTGND
BB004
VH
CB001
10N0
RB001
1K5
JB009
RB079
47R0
DB006
BAV21
CB006
10U0
CB004
100N0
RB021
1K2
RB061
1K2
RB041
1K2
IB001
TDA6108JF
RB032
100R0
RB072
100R0
RB052
100R0
DB031
BAV21
DB071
BAV21
DB051
BAV21
DB030
BAV21
DB070
BAV21
DB050
BAV21
RB031
560R0
RB071
560R0
RB051
560R0
BB010
RB011
1K0
CB005
100P0
V-GND
RG030
22R0
RG027
3K3
DG026
BZX55C6V8
RG026
3K3
CG010
22U0
RG002
1K8
CG052
27P0
RG004
2K2
CG054
22P0
RG003
2K7
CG053
18P0
CG001
100U0
CG002
100N0
RG005
2K2
RG008
18K0
TG002
BF370R
RG009
330R0
CG006
2P2
RG001
47R0
RG041
47R0
CG003
47U0
TG001
BF199
RG007
10R0
RG039
1K2
TG011
BC546B
CG031
1U0
RG040
18K0
RG006
180R0
RG010
2K0
CG004
100N0
RG011
330R0
DG003
1N4148
DG004
1N4148
RG014
10R0
CG005
470P0
RG012
47R0
DG001
1N4148
DG002
1N4148
CG012
22N0
RG013
6R8
CG007
22N0
RG019
1K0
RG021
56K0
TG006
BD140-16
RG032
56K0
CG009
22N0
RG023
1K0
TG007
BD139-16
RG029
1K0
CG048
47P0
RG042
390R0
BG003
to aux-coil
BSVM
BSVM-ATTENUATOR
BSVM-DRIVER
BSVM-OUTPUT STAGE

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

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P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231
DEVELOPMENT DEPT: CTV_FEY

INDEX	DATE	NAME	DESCRIPTION
E	17.09.99	RIEDM.	CORRECTION
I	24.03.00	J.David	C36460
H	08.02.00	RIEDM.	C33100
G	02.12.99	RIEDM.	CORRECTION
F	18.11.99	RIEDM.	C28630/30200

DRAWN
ON: 23.12.98
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER
CRT.BS20100.00	10626280

TV
ICC20
PAGE: 1
OF : 1

PCAD FORMAT DIN A1

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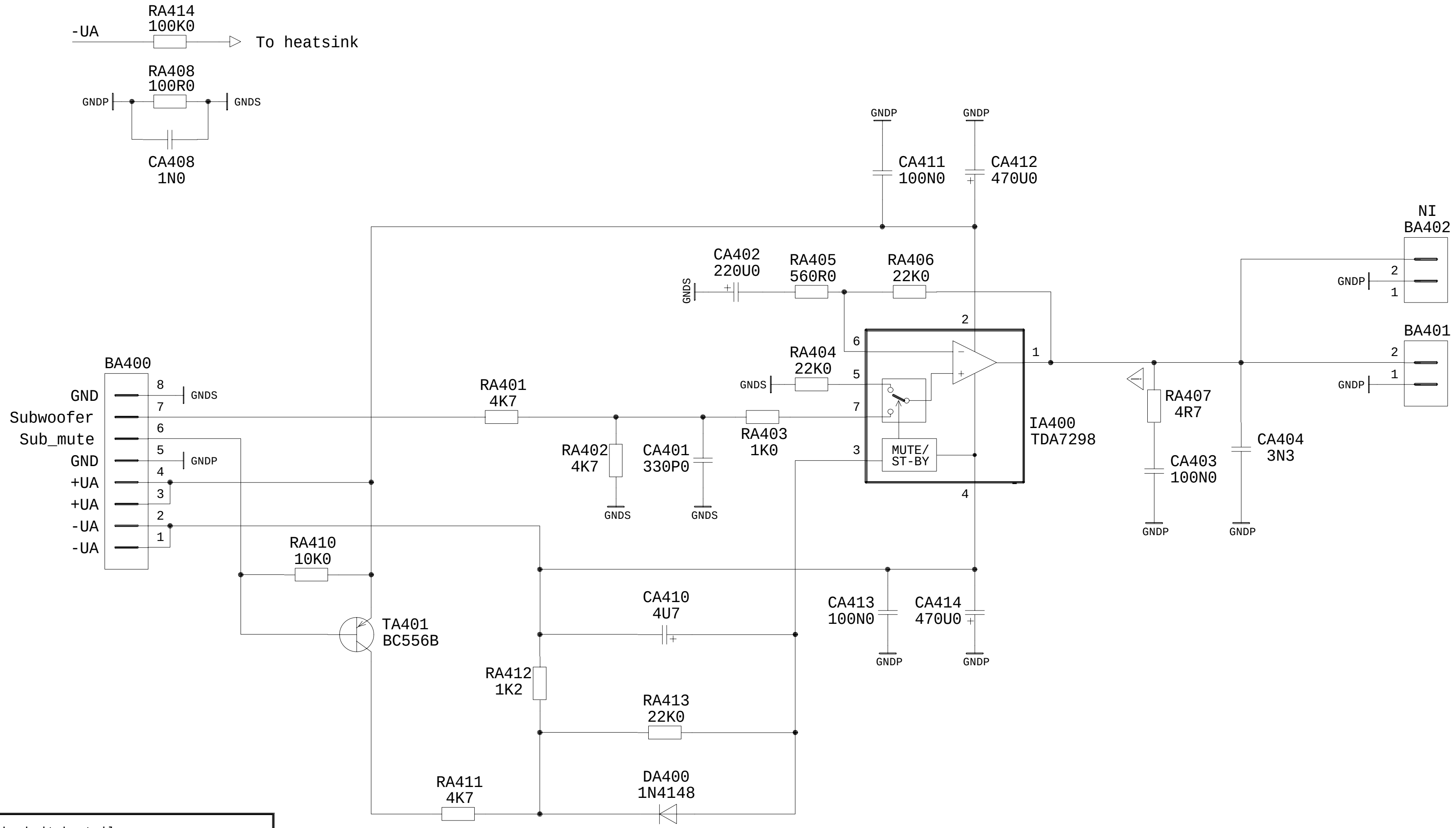
-UA
RA414
100K0
To heatsink
RA408
100R0
GNDP
GNDS
CA408
1N0
GNDP
GNDP
CA411
100N0
CA412
470U0
NI
BA402
CA402
220U0
RA405
560R0
RA406
22K0
GNDS
GNDP
2
1
BA401
2
1
GNDP
RA404
22K0
GNDS
6
5
7
3
2
1
4
IA400
TDA7298
MUTE/
ST-BY
RA407
4R7
CA403
100N0
CA404
3N3
GNDP
GNDP
BA400
GND
Subwoofer
Sub_mute
GND
+UA
+UA
-UA
-UA
8
7
6
5
4
3
2
1
GNDS
GNDP
RA401
4K7
RA402
4K7
CA401
330P0
RA403
1K0
GNDS
GNDS
RA410
10K0
TA401
BC556B
CA410
4U7
CA413
100N0
CA414
470U0
GNDP
GNDP
RA412
1K2
RA413
22K0
RA411
4K7
DA400
1N4148

⚠ Sicherheitsbauteil
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⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

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DEVELOPMENT DEPT: CTA_PEDUZZI

INDEX	DATE	NAME	DESCRIPTION
E	16.03.00	J.David	CORRECTION
D	30.11.99	RIEDM.	CORRECTION
C	15.11.99	RIEDM.	C28630/29920
B	11.06.99	LM	CORRECTION
A	06.05.99	RIEDM.	CORRECTION

DRAWN
ON: 26.04.99
BY: RIEDM.

CHECKED
ON:
BY:

DESIGNATION
PA/SW.20000.00

TOCOM-NUMBER
10626290

TV
IC20
PAGE: 1
OF : 1

PCAD FORMAT DIN A3

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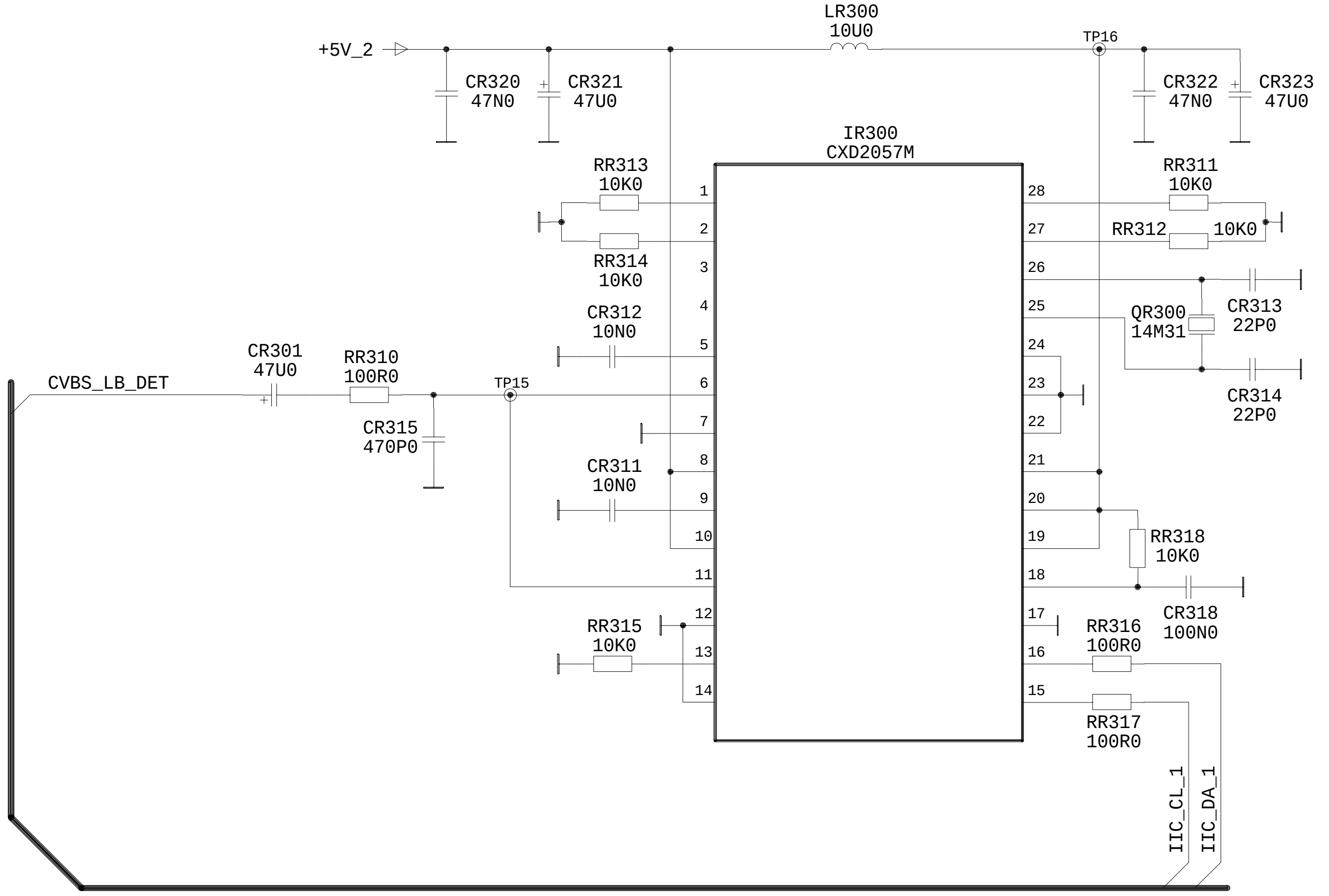
+5V_2
CR320
47N0
CR321
47U0
LR300
10U0
TP16
CR322
47N0
CR323
47U0
IR300
CXD2057M
RR313
10K0
RR314
10K0
RR311
10K0
RR312
10K0
CR312
10N0
QR300
14M31
CR313
22P0
CR314
22P0
CVBS_LB_DET
CR301
47U0
RR310
100R0
TP15
CR315
470P0
CR311
10N0
RR318
10K0
CR318
100N0
RR315
10K0
RR316
100R0
RR317
100R0
IIC_CL_1
IIC_DA_1
1
2
3
4
5
6
7
8
9
10
11
12
13
14
28
27
26
25
24
23
22
21
20
19
18
17
16
15

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DEVELOPMENT DEPT: CDH_WEHRLEIN

INDEX	DATE	NAME	DESCRIPTION
...	.._.._..	....	....
D	16.11.99	RIEDM.	00L3-CORR. C29710
C	27.05.99	RIEDM.	CORRECTION
B	10.05.99	RIEDM.	CORRECTION
A	22.04.99	RIEDM.	00L1-CORR.

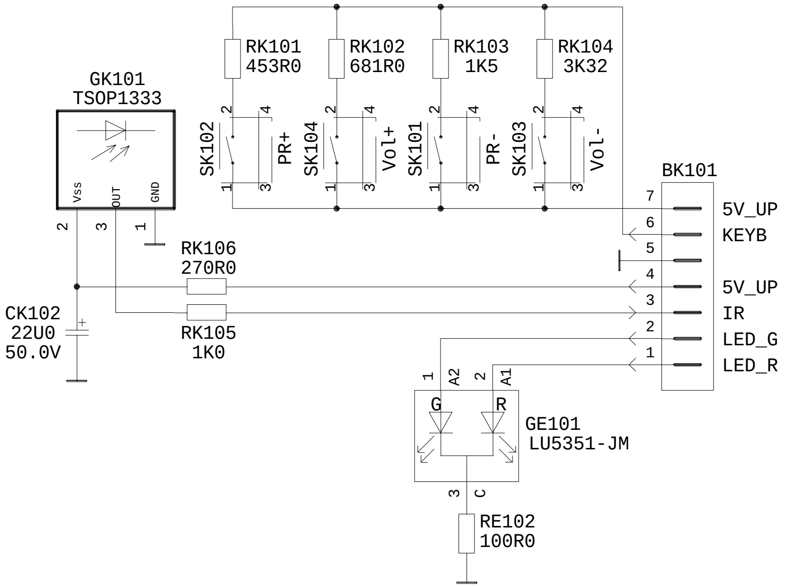
DRAWN
ON: 11.12.98
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER		TV
LBD.20000.00	10628350	00L3	IC20

PAGE: 1
OF : 1

PCAD FORMAT DIN A3

Breakable


RK101
453R0
RK102
681R0
RK103
1K5
RK104
3K32
GK101
TSOP1333
Vss
OUT
GND
2
3
1
SK102
PR+
SK104
Vol+
SK101
PR-
SK103
Vol-
BK101
7
6
5
4
3
2
1
5V_UP
KEYB
5V_UP
IR
LED_G
LED_R
RK106
270R0
RK105
1K0
CK102
22U0
50.0V
A2
A1
G
R
GE101
LU5351-JM
C
RE102
100R0

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DEVELOPMENT DEPT: CDH_BAUMANN

INDEX	DATE	NAME	DESCRIPTION
...	.._.._..	....	....
...	.._.._..	....	....
C	03.12.99	RIEDM.	CORRECTION
B	01.09.99	RIEDM.	00L2-CORR.
A	20.04.99	H.RUF	CORRECTION

DRAWN
ON: 15.04.99
BY: RIEDM.

CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER
KB.20000.00	10636860

TV
IC20
PAGE: 1
OF : 1

PCAD FORMAT DIN A3

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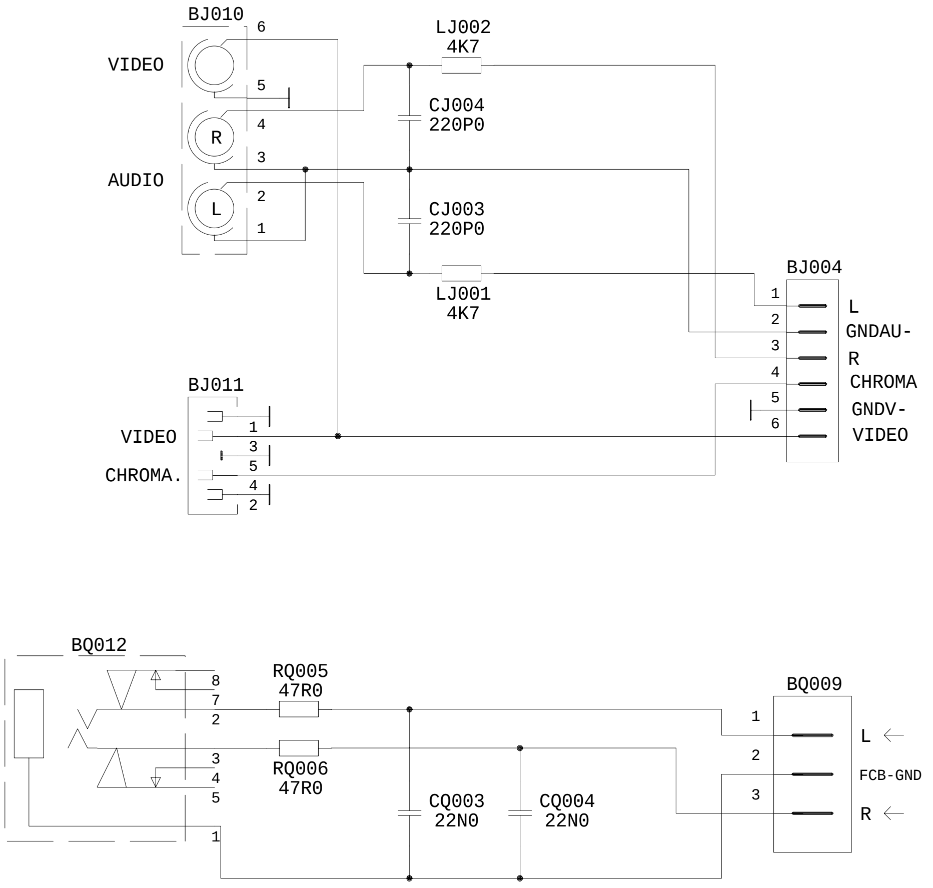
Breakable


BJ010
6
VIDEO
5
4
R
3
AUDIO
2
L
1
LJ002
4K7
CJ004
220P0
CJ003
220P0
LJ001
4K7
BJ004
1
L
2
GNDAU-
3
R
4
CHROMA
5
GNDV-
6
VIDEO
BJ011
VIDEO
1
3
CHROMA.
5
4
2
BQ012
8
7
2
3
4
5
1
RQ005
47R0
RQ006
47R0
CQ003
22N0
CQ004
22N0
BQ009
1
L ←
2
FCB-GND
3
R ←

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DEVELOPMENT DEPT: CTA-PEDUZZI
CTV-MIKA

INDEX	DATE	NAME	DESCRIPTION
...	.._.._..	....	....
...	.._.._..	....	....
C	25.02.00	RIEDM.	C31330
B	05.08.99	RIEDM.	00L2-CORR.
A	07.04.99	RIEDM.	CORRECTION

DRAWN
ON: 22.12.98
BY: J.DAVID

CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER
FCB.20000.00	10636870

TV
ICC20
PAGE: 1
OF : 1

PCAD FORMAT DIN A3

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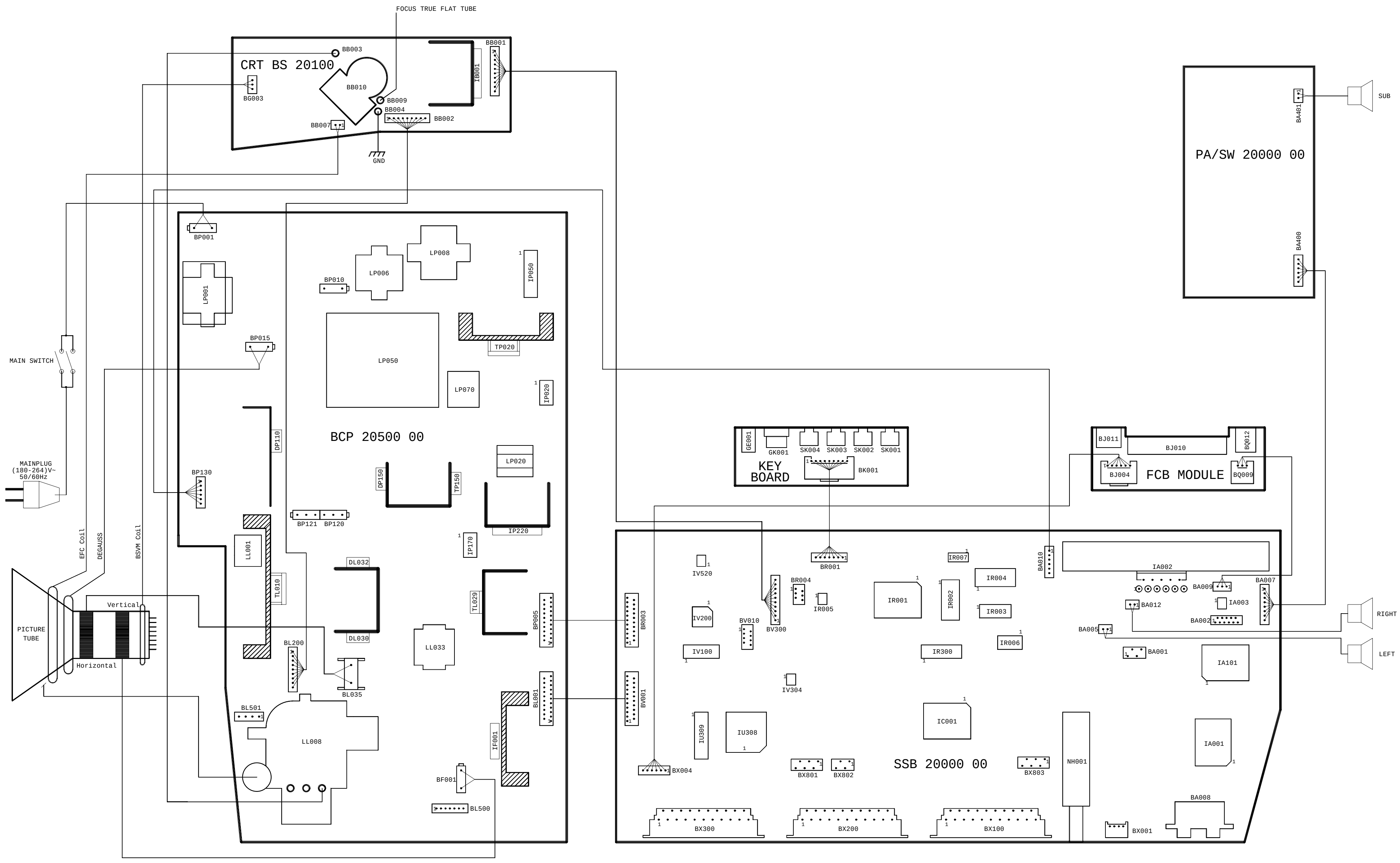
FOCUS TRUE FLAT TUBE
CRT BS 20100
BB003
BB001
IB001
BB010
BG003
BB009
BB004
BB002
BB007
GND
PA/SW 20000 00
BA401
SUB
BA400
BP001
LP008
LP006
BP010
IP050
LP001
BP015
LP050
TP020
LP070
IP020
MAIN SWITCH
DP110
BCP 20500 00
MAINPLUG
(180-264)V~
50/60Hz
BP130
DP150
TP150
LP020
BP121
BP120
IP220
IP170
EFC Coil
DEGAUSS
BSVM Coil
LL001
TL010
DL032
DL030
TL029
BP005
LL033
PICTURE
TUBE
Vertical
Horizontal
BL200
BL035
BL501
LL008
BL001
IF001
BF001
BL500
KEY
BOARD
GE001
GK001
SK004
SK003
SK002
SK001
BK001
FCB MODULE
BJ011
BJ010
BQ012
BJ004
BQ009
SSB 20000 00
BR001
IR007
BA010
IA002
IV520
BR004
BV300
IR005
IR001
IR002
IR004
IR003
BA009
BA007
BA012
IA003
BA002
IV200
BV010
BR003
BV001
IV100
IR300
IR006
BA005
BA001
IA101
RIGHT
LEFT
IV304
IC001
IU309
IU308
IA001
BX004
BX801
BX802
BX803
NH001
BA008
BX300
BX200
BX100
BX001

THOMSON MULTI MEDIA tv product development europe P.O.Box 1307 D-78003 Villingen Germany Tel (49) 7721/85 03 Fax (49) 7721/852231	...	.._.._..	....	....	DRAWN ON: 22.02.00 BY: RIEDM.	DESIGNATION ICC20_TV_WIRING_DIAGRAM	TOCOM-NUMBER 10638090	TV IC20
	...	.._.._..	....	....				
	...	.._.._..	....	....				
	B	03.05.00	J.David	CORRECTION	CHECKED			PAGE: 1
DEVELOPMENT DEPT: CAT_DUFFNER	A	14-03-00	J.David	....	ON:			OF : 2
	INDEX	DATE	NAME	DESCRIPTION	BY:			

PCAD FORMAT DIN A1

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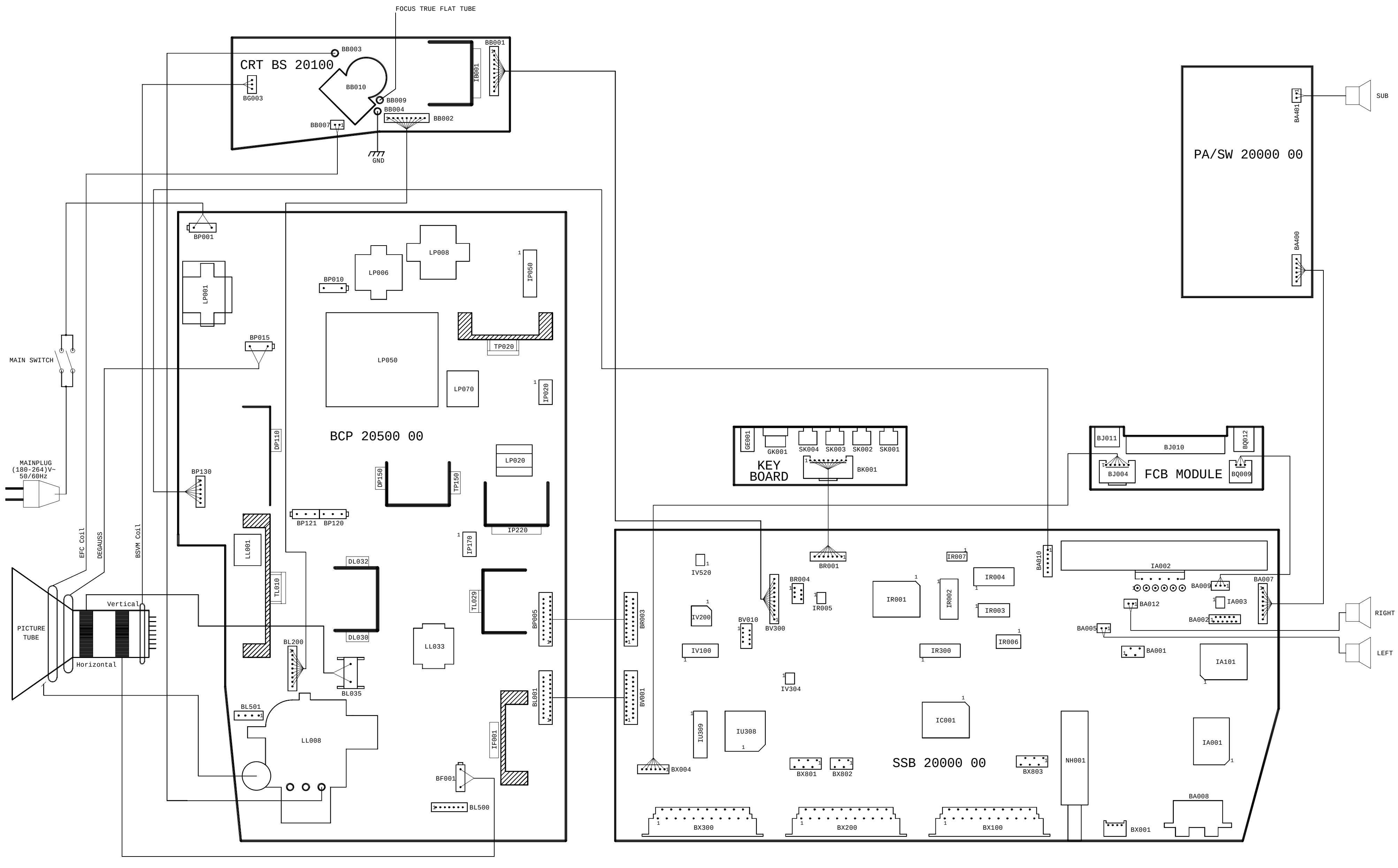
FOCUS TRUE FLAT TUBE
CRT BS 20100
BB003
BB001
BB010
IB001
BG003
BB009
BB004
BB007
BB002
GND
PA/SW 20000 00
BA401
SUB
BA400
BP001
LP008
LP006
BP010
IP050
LP001
BP015
TP020
LP050
MAIN SWITCH
LP070
IP020
DP110
BCP 20500 00
MAINPLUG
(180-264)V~
50/60Hz
BP130
DP150
TP150
LP020
BP121
BP120
IP220
IP170
EFC Coil
DEGAUSS
BSVM Coil
LL001
DL032
TL010
TL029
PICTURE TUBE
Vertical
Horizontal
BP005
DL030
LL033
BL200
BL035
BL001
BL501
LL008
IF001
BF001
BL500
GE001
GK001
SK004
SK003
SK002
SK001
KEY BOARD
BK001
BJ011
BJ010
BQ012
BJ004
FCB MODULE
BQ009
BR001
IR007
BA010
IV520
IA002
BR004
IR004
BA009
BA007
IR001
IR002
BV300
IR005
IA003
BR003
IV200
BV010
BA012
IR003
RIGHT
BA002
BA005
IR006
IV100
IR300
BA001
LEFT
IA101
BV001
IV304
IC001
IU309
IU308
IA001
NH001
BX004
BX801
BX802
SSB 20000 00
BX803
BA008
BX300
BX200
BX100
BX001

THOMSON MULTI MEDIA
tv product development europe
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Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CAT_DUFFNER

INDEX	DATE	NAME	DESCRIPTION
...	.._.._..	....	....
...	.._.._..	....	....
...	.._.._..	....	....
B	03.05.00	J.David	CORRECTION
A	14-03-00	J.David	....

DRAWN
ON: 22.02.00
BY: RIEDM.

CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER
ICC20_TV_WIRING_DIAGRAM	10638090

TV
IC20
PAGE: 1
OF : 2

PCAD FORMAT DIN A1

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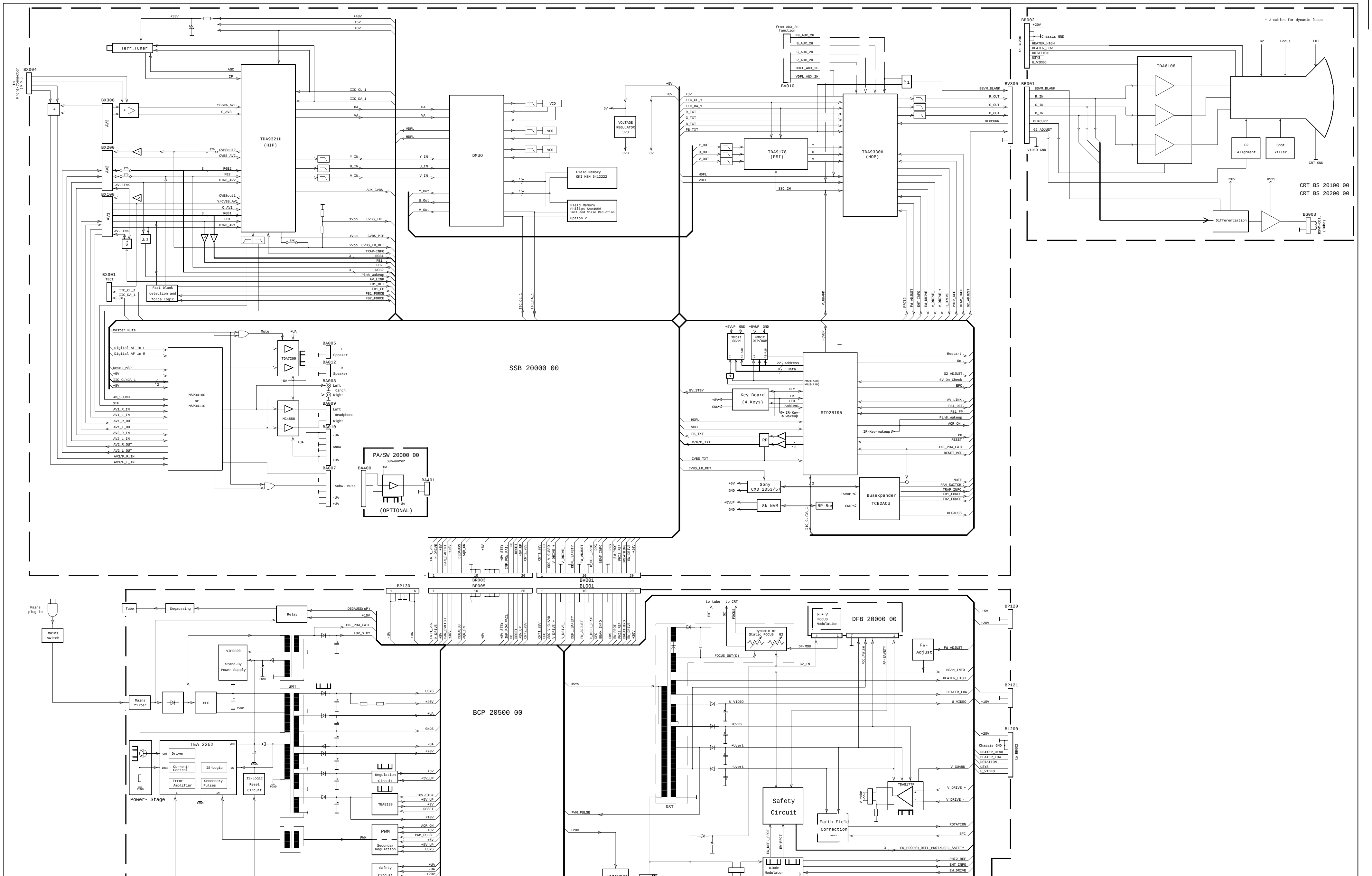
Terr.Tuner
TDA9321H (HIP)
DMUO
VOLTAGE REGULATOR 3V3
Field Memory OKI MSM 5412222
Field Memory Philips SAA4956 included Noise Reduction Option 2
TDA9178 (PSI)
TDA9330H (HOP)
from AUX_2H function
BV010
TDA6108
G2 Allgnment
Spot killer
Differentiation
CRT BS 20100 00
CRT BS 20200 00
* 2 cables for dynamic focus
G2
Focus
EHT
CRT GND
BG003
BB002
BV300
BB001
BX004
to Front-Connector (6 p.)
BX300
AV3
BX200
AV2
BX100
AV1
BX001
TECI
Fast blank detection and force logic
SSB 20000 00
MSP3410G or MSP3411G
TDA7269
MC4558
BA005
BA012
BA008
BA009
BA010
BA007
L Speaker
R Speaker
Left Cinch Right
Left Headphone Right
Subw. Mute
PA/SW 20000 00
Subwoofer
BA400
BA401
(OPTIONAL)
1Mbit SRAM
4Mbit OTP/ROM
Key Board (4 Keys)
ST92R195
RP
Sony CXD 2053/57
8k NVM
RP-Bus
Busexpander TCE2ACU
BR003
BP005
BV001
BL001
BP130
Mains plug-in
Mains switch
Tube
Degaussing
Relay
VIPER20
Stand-By Power-Supply
SMT
Mains filter
PFC
TEA 2262
Driver
Current-Control
IS-Logic
Error Amplifier
Secondary Pulses
IS-Logic Reset Circuit
Power- Stage
Regulation Circuit
TEA8139
PWM
Secondar Regulation
Safety Circuit
opto-coupler
BCP 20500 00
DST
Dynamic or Static FOCUS
H + V FOCUS Modulation
DFB 20000 00
FW-Adjust
Safety Circuit
Earth Field Correction
TDA8177F
Forewared Line Driver
Hor.Yoke
Diode Modulator
BP120
BP121
BL200
to BB002

THOMSON MULTI MEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CLT_THIBAULT

INDEX	DATE	NAME	DESCRIPTION
B	03.05.00	J.David	CORRECTION
A	15.03.99	RIEDM.	CORRECTION

DRAWN
ON: 11.11.98
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION
ICC20_TV_BLOCK_DIAGRAM

TOCOM-NUMBER
10638090

TV
IC20
PAGE: 2
OF : 2

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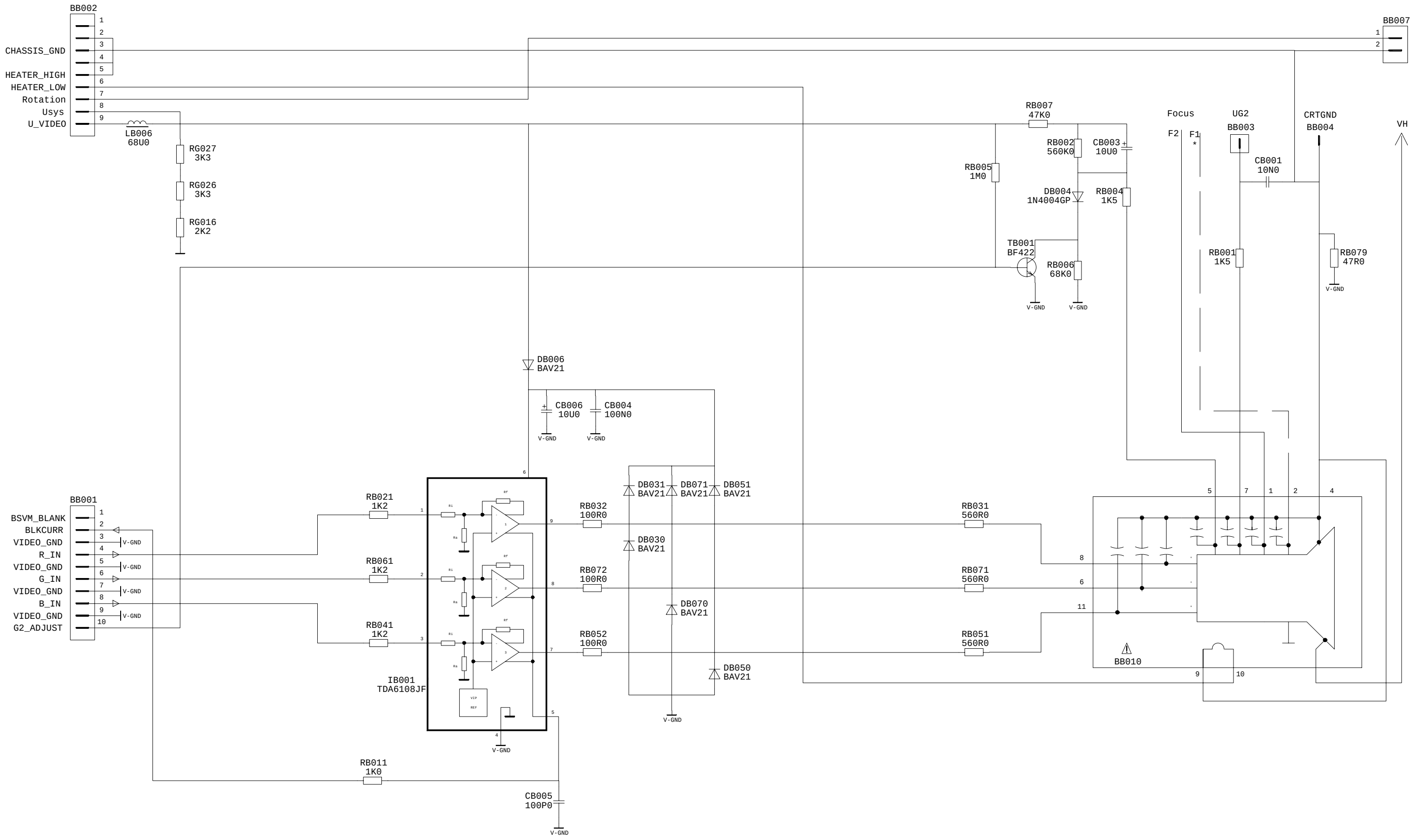
BB002
CHASSIS_GND
HEATER_HIGH
HEATER_LOW
Rotation
Usys
U_VIDEO
1
2
3
4
5
6
7
8
9
LB006
68U0
RG027
3K3
RG026
3K3
RG016
2K2
BB007
1
2
RB007
47K0
RB002
560K0
CB003
10U0
RB005
1M0
DB004
1N4004GP
RB004
1K5
TB001
BF422
RB006
68K0
V-GND
Focus
F2
F1
UG2
BB003
CB001
10N0
CRTGND
BB004
RB001
1K5
RB079
47R0
VH
DB006
BAV21
CB006
10U0
CB004
100N0
BB001
BSVM_BLANK
BLKCURR
VIDEO_GND
R_IN
VIDEO_GND
G_IN
VIDEO_GND
B_IN
VIDEO_GND
G2_ADJUST
10
RB021
1K2
RB061
1K2
RB041
1K2
Ri
Ra
Rf
VIP
REF
IB001
TDA6108JF
RB032
100R0
RB072
100R0
RB052
100R0
DB031
BAV21
DB071
BAV21
DB051
BAV21
DB030
BAV21
DB070
BAV21
DB050
BAV21
RB031
560R0
RB071
560R0
RB051
560R0
11
BB010
RB011
1K0
CB005
100P0

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

THOMSON MULTI MEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CTV_FEY

INDEX	DATE	NAME	DESCRIPTION
E	18.11.99	RIEDM.	C30200
D	17.09.99	RIEDM.	CORRECTION
H	04.04.00	J.David	C34730
G	08.02.00	RIEDM.	C33100/680
F	02.12.99	RIEDM.	CORRECTION

DRAWN
ON: 23.12.98
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION: CRT.20000.00
TOCOM-NUMBER: 10638180

TV
ICC20
PAGE: 1
OF : 1

PCAD FORMAT DIN A1

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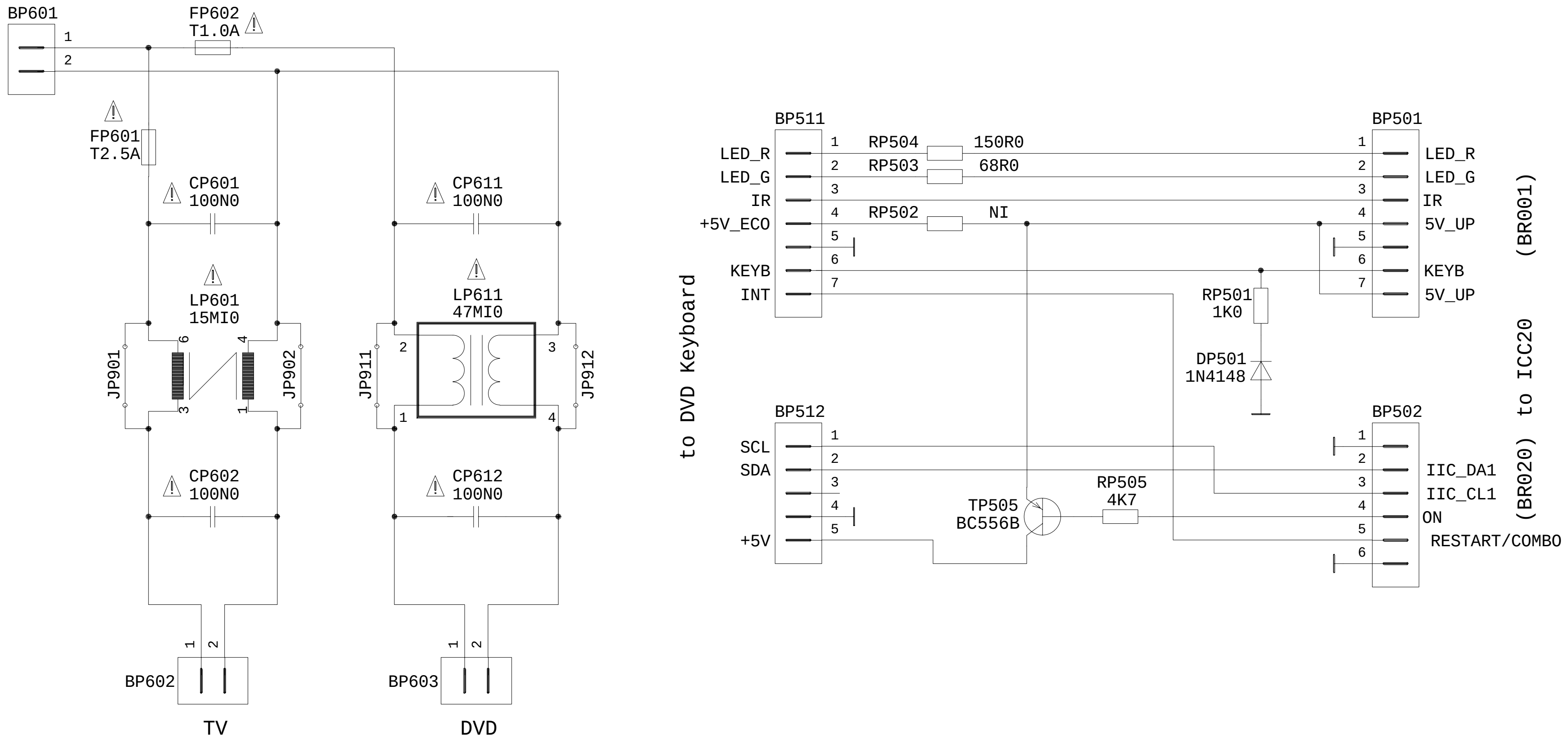

BP601
1
2
FP602
T1.0A
⚠
⚠
FP601
T2.5A
⚠ CP601
100N0
⚠ CP611
100N0
⚠
LP601
15MI0
⚠
LP611
47MI0
JP901
6
4
3
1
JP902
JP911
2
3
1
4
JP912
⚠ CP602
100N0
⚠ CP612
100N0
1
2
BP602
TV
1
2
BP603
DVD
to DVD Keyboard
BP511
LED_R
LED_G
IR
+5V_ECO
KEYB
INT
1
2
3
4
5
6
7
RP504
150R0
RP503
68R0
RP502
NI
BP501
LED_R
LED_G
IR
5V_UP
KEYB
5V_UP
(BR001)
RP501
1K0
DP501
1N4148
BP512
SCL
SDA
+5V
TP505
BC556B
RP505
4K7
BP502
IIC_DA1
IIC_CL1
ON
RESTART/COMBO
(BR020) to ICC20

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

THOMSON MULTI MEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CPS_THIBAULT

INDEX	DATE	NAME	DESCRIPTION
...	.._.._..	....	....
...	.._.._..	....	....
...	.._.._..	....	....
...	.._.._..	....	....
...	.._.._..	....	....

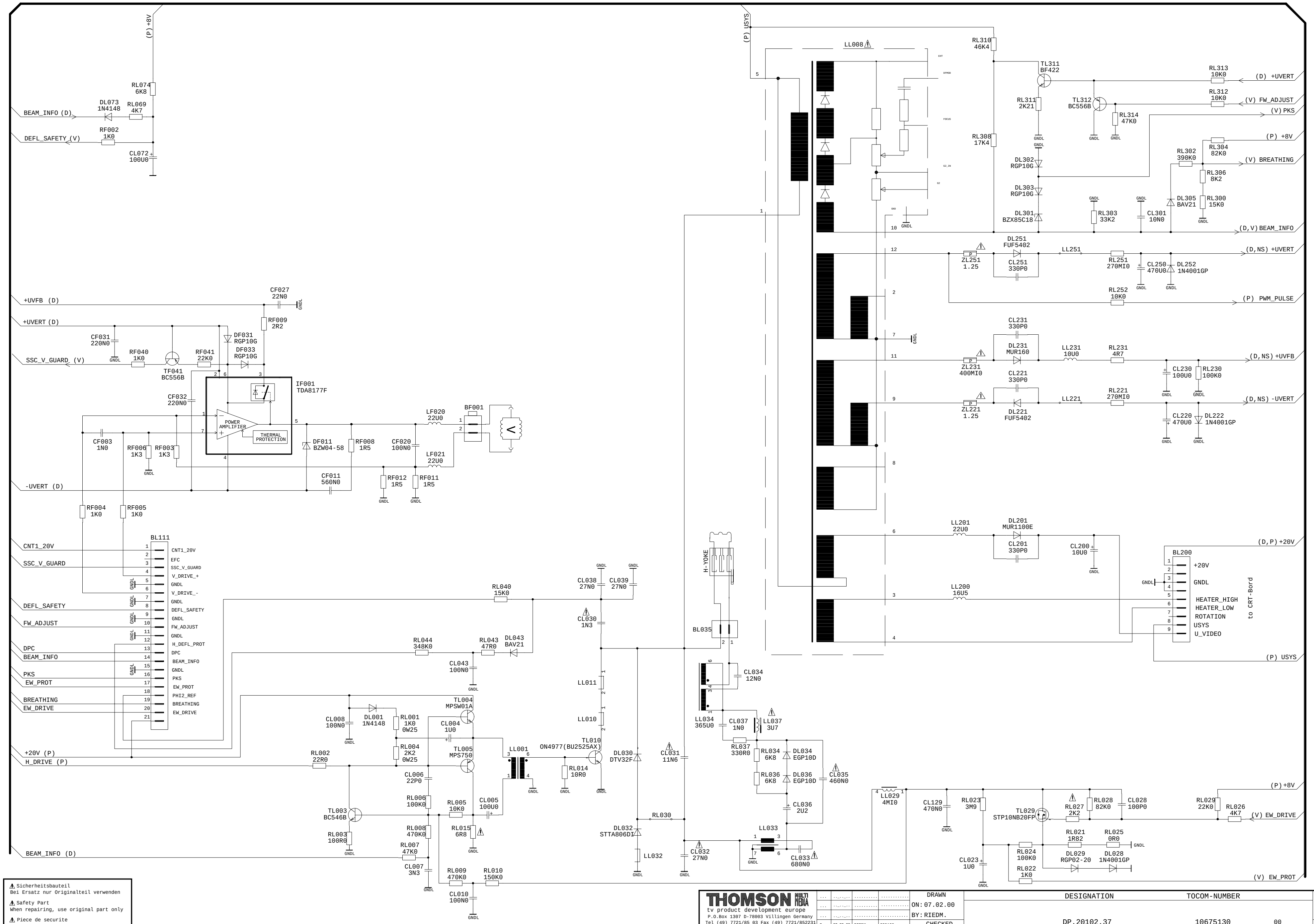
DRAWN
ON: 24.01.00
BY: RIEDM.

CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER
PD.DVD.20000.00	10673240

TV
IC20
PAGE: 1
OF : 1

PCAD FORMAT DIN A3


(P) +8V
BEAM_INFO (D)
DEFL_SAFETY (V)
+UVFB (D)
+UVERT (D)
SSC_V_GUARD (V)
-UVERT (D)
CNT1_20V
SSC_V_GUARD
DEFL_SAFETY
FW_ADJUST
DPC
BEAM_INFO
PKS
EW_PROT
BREATHING
EW_DRIVE
+20V (P)
H_DRIVE (P)
BEAM_INFO (D)
IF001
TDA8177F
POWER AMPLIFIER
THERMAL PROTECTION
BL111
BF001
H-YOKE
BL035
LL008
(P) USYS
TL311
BF422
TL312
BC556B
(D) +UVERT
(V) FW_ADJUST
(V) PKS
(P) +8V
(V) BREATHING
(D,V) BEAM_INFO
(D,NS) +UVERT
(P) PWM_PULSE
(D,NS) +UVFB
(D,NS) -UVERT
(D,P) +20V
BL200
+20V
GNDL
HEATER_HIGH
HEATER_LOW
ROTATION
USYS
U_VIDEO
to CRT-Bord
(P) USYS
(P) +8V
(V) EW_DRIVE
(V) EW_PROT
TL029
STP10NB20FP
TL010
ON4977(BU2525AX)
TL004
MPSW01A
TL005
MPS750
TL003
BC546B
LL001
LL034
365U0
LL033
LL029
4MI0
LL037
3U7
DL030
DTV32F
DL032
STTA806DI

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⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

THOMSON MULTI MEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CPS_LOESLE LAEUFER

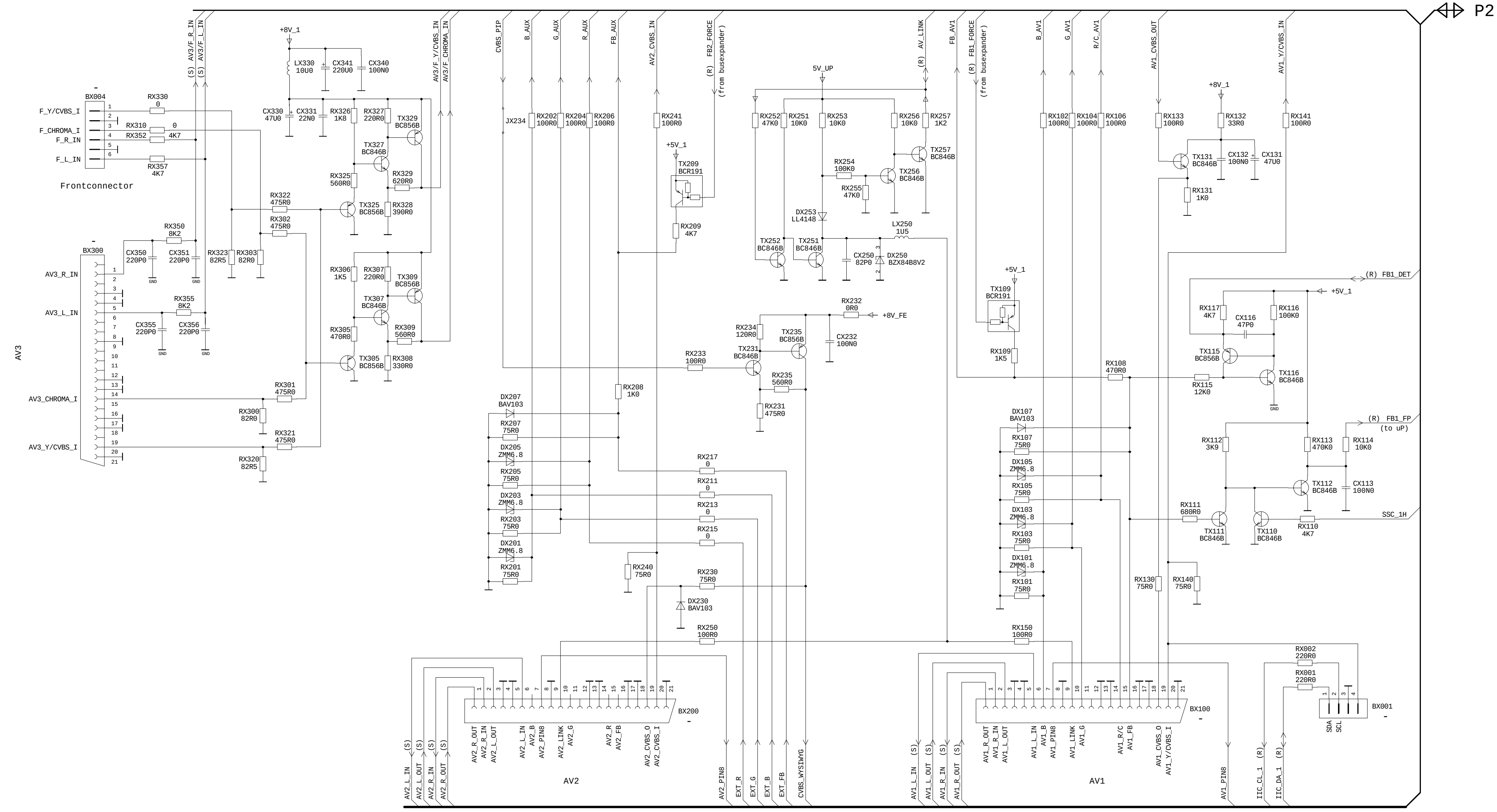
INDEX	DATE	NAME	DESCRIPTION
...	.._.._..	....	....
...	.._.._..	....	....
...	.._.._..	....	....
B	02.05.00	RIEDM.	C39120
A	31.03.00	J.David	C35190/790 C35340/60/36560 C36920/290/950

DRAWN
ON: 07.02.00
BY: RIEDM.

CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER		TV
			IC20
DP.20102.37	10675130	00	PAGE: 1
			OF : 1

PCAD FORMAT DIN A1


P2
Frontconnector
BX004
F_Y/CVBS_I
F_CHROMA_I
F_R_IN
F_L_IN
RX330 0
RX310 0
RX352 4K7
RX357 4K7
BX300
AV3
AV3_R_IN
AV3_L_IN
AV3_CHROMA_I
AV3_Y/CVBS_I
CX350 220P0
CX351 220P0
RX350 8K2
RX355 8K2
CX355 220P0
CX356 220P0
RX323 82R5
RX303 82R0
RX322 475R0
RX302 475R0
RX301 475R0
RX300 82R0
RX321 475R0
RX320 82R5
(S) AV3/F_R_IN
(S) AV3/F_L_IN
+8V_1
LX330 10U0
CX341 220U0
CX340 100N0
CX330 47U0
CX331 22N0
RX326 1K8
RX327 220R0
TX329 BC856B
TX327 BC846B
RX325 560R0
RX329 620R0
TX325 BC856B
RX328 390R0
RX306 1K5
RX307 220R0
TX309 BC856B
TX307 BC846B
RX305 470R0
RX309 560R0
TX305 BC856B
RX308 330R0
AV3/F_Y/CVBS_IN
AV3/F_CHROMA_IN
CVBS_PIP
B_AUX
G_AUX
R_AUX
FB_AUX
AV2_CVBS_IN
(R) FB2_FORCE (from busexpander)
JX234
RX202 100R0
RX204 100R0
RX206 100R0
RX241 100R0
+5V_1
TX209 BCR191
RX209 4K7
RX208 1K0
DX207 BAV103
RX207 75R0
DX205 ZMM6.8
RX205 75R0
DX203 ZMM6.8
RX203 75R0
DX201 ZMM6.8
RX201 75R0
RX217 0
RX211 0
RX213 0
RX215 0
RX240 75R0
RX230 75R0
DX230 BAV103
RX250 100R0
RX233 100R0
RX234 120R0
TX231 BC846B
TX235 BC856B
RX235 560R0
RX231 475R0
RX232 0R0
+8V_FE
CX232 100N0
5V_UP
RX252 47K0
RX251 10K0
RX253 10K0
RX256 10K0
RX257 1K2
(R) AV_LINK
TX257 BC846B
RX254 100K0
TX256 BC846B
RX255 47K0
DX253 LL4148
LX250 1U5
TX252 BC846B
TX251 BC846B
CX250 82P0
DX250 BZX84B8V2
FB_AV1
(R) FB1_FORCE (from busexpander)
+5V_1
TX109 BCR191
RX109 1K5
B_AV1
G_AV1
R/C_AV1
RX102 100R0
RX104 100R0
RX106 100R0
RX108 470R0
DX107 BAV103
RX107 75R0
DX105 ZMM6.8
RX105 75R0
DX103 ZMM6.8
RX103 75R0
DX101 ZMM6.8
RX101 75R0
RX150 100R0
AV1_CVBS_OUT
AV1_Y/CVBS_IN
+8V_1
RX133 100R0
RX132 33R0
RX141 100R0
TX131 BC846B
CX132 100N0
CX131 47U0
RX131 1K0
(R) FB1_DET
+5V_1
RX117 4K7
CX116 47P0
RX116 100K0
TX115 BC856B
TX116 BC846B
RX115 12K0
GND
(R) FB1_FP (to uP)
RX112 3K9
RX113 470K0
RX114 10K0
TX112 BC846B
CX113 100N0
RX111 680R0
TX111 BC846B
TX110 BC856B
RX110 4K7
SSC_1H
RX130 75R0
RX140 75R0
RX002 220R0
RX001 220R0
BX001
SDA
SCL
BX200
AV2
AV2_R_OUT
AV2_R_IN
AV2_L_OUT
AV2_L_IN
AV2_B
AV2_PIN8
AV2_LINK
AV2_G
AV2_R
AV2_FB
AV2_CVBS_O
AV2_CVBS_I
(S) AV2_L_IN
(S) AV2_L_OUT
(S) AV2_R_IN
(S) AV2_R_OUT
AV2_PIN8
EXT_R
EXT_G
EXT_B
EXT_FB
CVBS_WYSIWYG
BX100
AV1
AV1_R_OUT
AV1_R_IN
AV1_L_OUT
AV1_L_IN
AV1_B
AV1_PIN8
AV1_LINK
AV1_G
AV1_R/C
AV1_FB
AV1_CVBS_O
AV1_Y/CVBS_I
AV1_L_IN (S)
AV1_L_OUT (S)
AV1_R_IN (S)
AV1_R_OUT (S)
AV1_PIN8
IIC_CL_1 (R)
IIC_DA_1 (R)

THOMSON multimedia tv product development europe P.O.Box 1307 D-78003 Villingen Germany Tel (49) 7721/85 03 Fax (49) 7721/852231	DRAWN ON: 07.04.00 BY: J.David CHECKED ON: BY:	DESIGNATION	TOCOM-NUMBER		TV IC20
DEVELOPMENT DEPT: CTV_MIKA		FE.20001.00	10677100	00	PAGE: 1 OF : 3

INDEX DATE NAME DESCRIPTION

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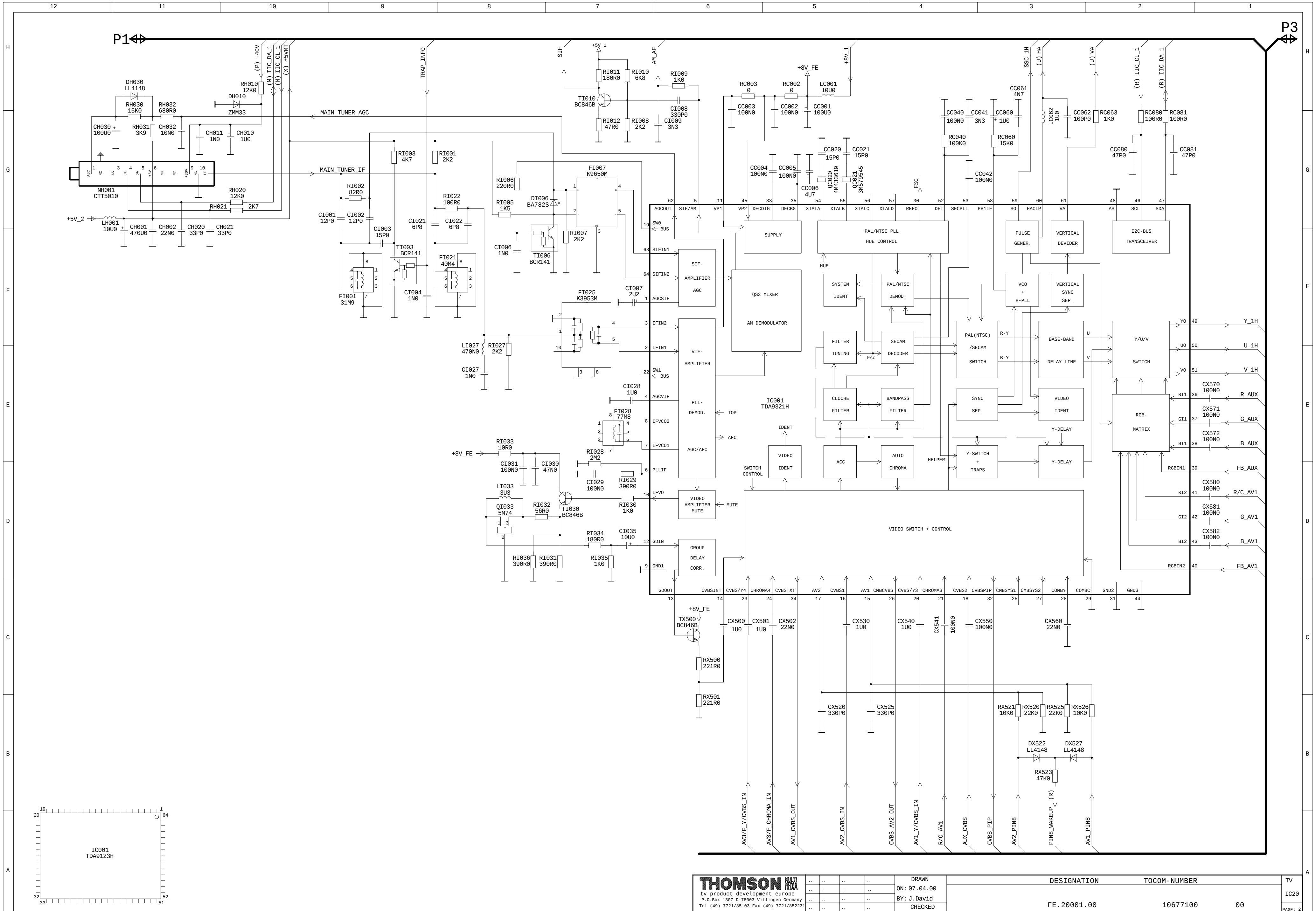

P1
P3
(P) +40V
(M) IIC_DA_1
(M) IIC_CL_1
(X) +5VMT
TRAP_INFO
SIF
AM_AF
+8V_1
SSC_1H
(U) HA
(U) VA
(R) IIC_CL_1
(R) IIC_DA_1
MAIN_TUNER_AGC
MAIN_TUNER_IF
NH001
CTT5010
DH030 LL4148
RH030 15K0
RH032 680R0
RH010 12K0
DH010 ZMM33
CH030 100U0
RH031 3K9
CH032 10N0
CH011 1N0
CH010 1U0
RH020 12K0
RH021 2K7
+5V_2
LH001 10U0
CH001 470U0
CH002 22N0
CH020 33P0
CH021 33P0
RI003 4K7
RI001 2K2
RI002 82R0
CI001 12P0
CI002 12P0
CI003 15P0
TI003 BCR141
FI001 31M9
CI004 1N0
RI022 100R0
CI021 6P8
CI022 6P8
FI021 40M4
RI006 220R0
RI005 1K5
DI006 BA782S
FI007 K9650M
RI007 2K2
CI006 1N0
TI006 BCR141
+5V_1
RI011 180R0
RI010 6K8
TI010 BC846B
RI012 47R0
RI008 2K2
RI009 1K0
CI008 330P0
CI009 3N3
FI025 K3953M
CI007 2U2
LI027 470N0
RI027 2K2
CI027 1N0
CI028 1U0
FI028 77M8
RI033 10R0
+8V_FE
CI031 100N0
CI030 47N0
LI033 3U3
QI033 5M74
RI032 56R0
TI030 BC846B
RI028 2M2
CI029 100N0
RI029 390R0
RI030 1K0
RI034 180R0
CI035 10U0
RI036 390R0
RI031 390R0
RI035 1K0
RC003 0
RC002 0
+8V_FE
LC001 10U0
CC003 100N0
CC002 100N0
CC001 100U0
CC004 100N0
CC005 100N0
CC006 4U7
CC020 15P0
CC021 15P0
QC020 4M433619
QC021 3M579545
FSC
CC042 100N0
CC040 100N0
CC041 3N3
CC060 1U0
RC040 100K0
RC060 15K0
CC061 4N7
LC062 1U0
CC062 100P0
RC063 1K0
CC080 47P0
RC080 100R0
RC081 100R0
CC081 47P0
IC001
TDA9321H
AGCOUT
SIF/AM
VP1
VP2
DECDIG
DEC8G
XTALA
XTALB
XTALC
XTALD
REFO
DET
SECPLL
PH1LF
SO
HACLP
VA
AS
SCL
SDA
SW0
BUS
SIFIN1
SIFIN2
AGCSIF
IFIN2
IFIN1
SW1
AGCVIF
IFVCO2
IFVCO1
PLLIF
IFVO
GDIN
GND1
SIF-AMPLIFIER AGC
QSS MIXER
AM DEMODULATOR
VIF-AMPLIFIER
PLL-DEMOD.
AGC/AFC
TOP
AFC
VIDEO AMPLIFIER MUTE
MUTE
GROUP DELAY CORR.
SUPPLY
PAL/NTSC PLL
HUE CONTROL
HUE
SYSTEM IDENT
PAL/NTSC DEMOD.
FILTER TUNING
SECAM DECODER
Fsc
CLOCHE FILTER
BANDPASS FILTER
PAL(NTSC) /SECAM SWITCH
R-Y
B-Y
BASE-BAND DELAY LINE
U
V
Y/U/V SWITCH
PULSE GENER.
VERTICAL DEVIDER
I2C-BUS TRANSCEIVER
VCO + H-PLL
VERTICAL SYNC SEP.
SYNC SEP.
VIDEO IDENT
RGB-MATRIX
Y-DELAY
Y-SWITCH + TRAPS
HELPER
ACC
AUTO CHROMA
VIDEO IDENT
IDENT
SWITCH CONTROL
VIDEO SWITCH + CONTROL
YO
UO
VO
RI1
GI1
BI1
RGBIN1
RI2
GI2
BI2
RGBIN2
Y_1H
U_1H
V_1H
CX570 100N0
R_AUX
CX571 100N0
G_AUX
CX572 100N0
B_AUX
FB_AUX
CX580 100N0
R/C_AV1
CX581 100N0
G_AV1
CX582 100N0
B_AV1
FB_AV1
GDOUT
CVBSINT
CVBS/Y4
CHROMA4
CVBSTXT
AV2
CVBS1
AV1
CMBCVBS
CVBS/Y3
CHROMA3
CVBS2
CVBSPIP
CMBSYS1
CMBSYS2
COMBY
COMBC
GND2
GND3
+8V_FE
TX500 BC846B
RX500 221R0
RX501 221R0
CX500 1U0
CX501 1U0
CX502 22N0
CX530 1U0
CX540 1U0
CX541 100N0
CX550 100N0
CX560 22N0
CX520 330P0
CX525 330P0
RX521 10K0
RX520 22K0
RX525 22K0
RX526 10K0
DX522 LL4148
DX527 LL4148
RX523 47K0
AV3/F_Y/CVBS_IN
AV3/F_CHROMA_IN
AV1_CVBS_OUT
AV2_CVBS_IN
CVBS_AV2_OUT
AV1_Y/CVBS_IN
R/C_AV1
AUX_CVBS
CVBS_PIP
AV2_PIN8
PIN8_WAKEUP (R)
AV1_PIN8
IC001
TDA9123H
1
19
20
32
33
51
52
64

THOMSON MULTIMEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CTV_MIKA

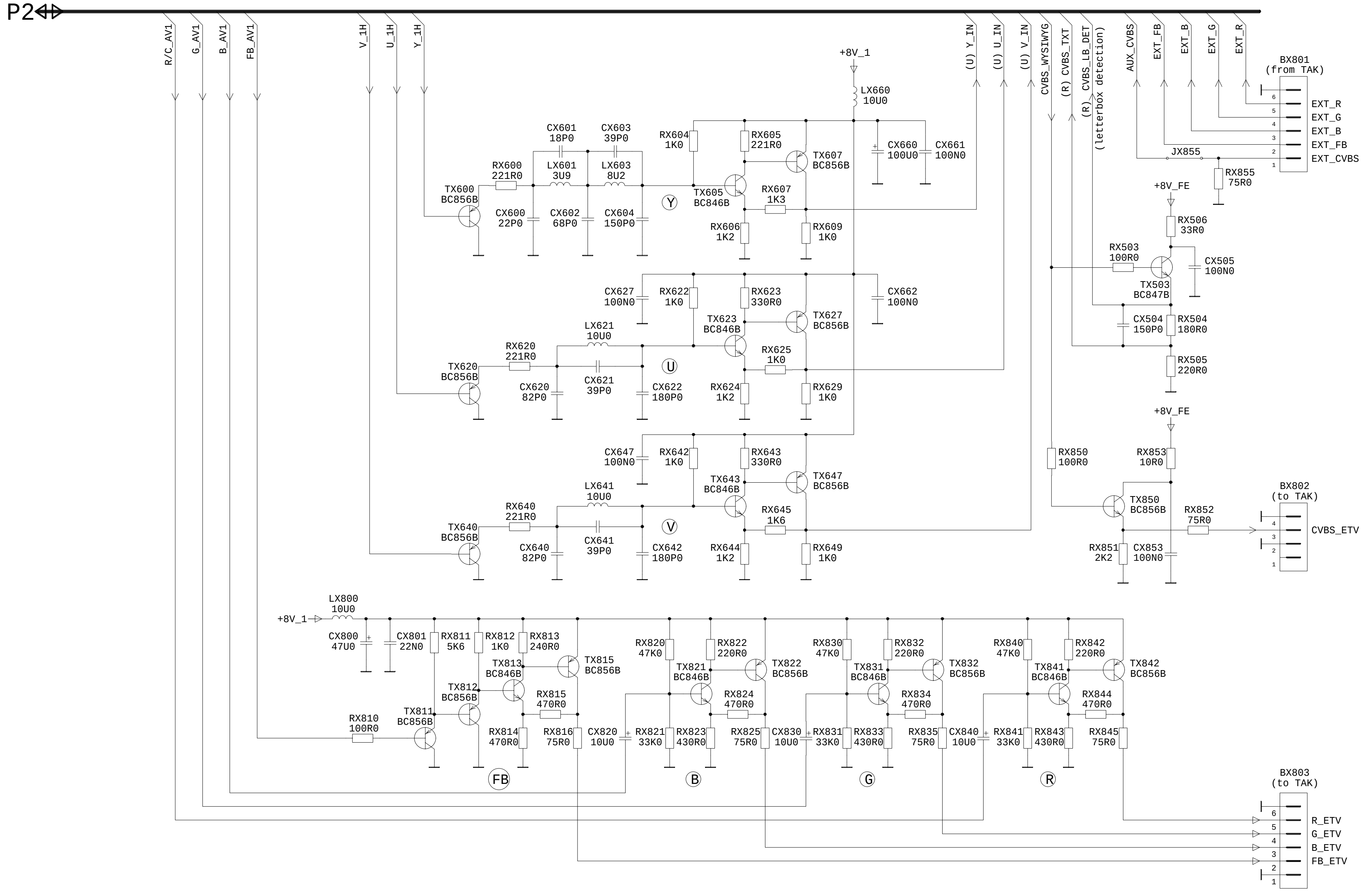
INDEX	DATE	NAME	DESCRIPTION
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..

DRAWN
ON: 07.04.00
BY: J.David
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER		TV
FE.20001.00	10677100	00	IC20

PAGE: 2
OF : 3

PCAD FORMAT DIN A1


P2
R/C_AV1
G_AV1
B_AV1
FB_AV1
V_1H
U_1H
Y_1H
(U) Y_IN
(U) U_IN
(U) V_IN
CVBS_WYSIWYG
(R) CVBS_TXT
(R) CVBS_LB_DET
(letterbox detection)
AUX_CVBS
EXT_FB
EXT_B
EXT_G
EXT_R
BX801
(from TAK)
6
5
4
3
2
1
EXT_R
EXT_G
EXT_B
EXT_FB
EXT_CVBS
JX855
RX855
75R0
+8V_1
LX660
10U0
CX601
18P0
CX603
39P0
RX600
221R0
LX601
3U9
LX603
8U2
TX600
BC856B
CX600
22P0
CX602
68P0
CX604
150P0
Y
RX604
1K0
RX605
221R0
TX607
BC856B
TX605
BC846B
RX607
1K3
RX606
1K2
RX609
1K0
CX660
100U0
CX661
100N0
+8V_FE
RX506
33R0
RX503
100R0
TX503
BC847B
CX505
100N0
CX504
150P0
RX504
180R0
RX505
220R0
CX627
100N0
RX622
1K0
RX623
330R0
TX623
BC846B
TX627
BC856B
CX662
100N0
LX621
10U0
RX620
221R0
TX620
BC856B
CX620
82P0
CX621
39P0
CX622
180P0
U
RX625
1K0
RX624
1K2
RX629
1K0
+8V_FE
CX647
100N0
RX642
1K0
RX643
330R0
TX643
BC846B
TX647
BC856B
LX641
10U0
RX640
221R0
TX640
BC856B
CX640
82P0
CX641
39P0
CX642
180P0
V
RX645
1K6
RX644
1K2
RX649
1K0
RX850
100R0
RX853
10R0
TX850
BC856B
RX852
75R0
BX802
(to TAK)
4
3
2
1
CVBS_ETV
RX851
2K2
CX853
100N0
+8V_1
LX800
10U0
CX800
47U0
CX801
22N0
RX811
5K6
RX812
1K0
RX813
240R0
TX813
BC846B
TX815
BC856B
TX812
BC856B
RX815
470R0
TX811
BC856B
RX810
100R0
RX814
470R0
RX816
75R0
FB
RX820
47K0
RX822
220R0
TX821
BC846B
TX822
BC856B
RX824
470R0
CX820
10U0
RX821
33K0
RX823
430R0
RX825
75R0
B
RX830
47K0
RX832
220R0
TX831
BC846B
TX832
BC856B
RX834
470R0
CX830
10U0
RX831
33K0
RX833
430R0
RX835
75R0
G
RX840
47K0
RX842
220R0
TX841
BC846B
TX842
BC856B
RX844
470R0
CX840
10U0
RX841
33K0
RX843
430R0
RX845
75R0
R
BX803
(to TAK)
6
5
4
3
2
1
R_ETV
G_ETV
B_ETV
FB_ETV

THOMSON MULTIMEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CTV_MIKA

INDEX	DATE	NAME	DESCRIPTION
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..
..	..	..	..

DRAWN
ON: 07.04.00
BY: J.David

CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER		TV
			IC20
FE.20001.00	10677100	00	PAGE: 3 OF : 3

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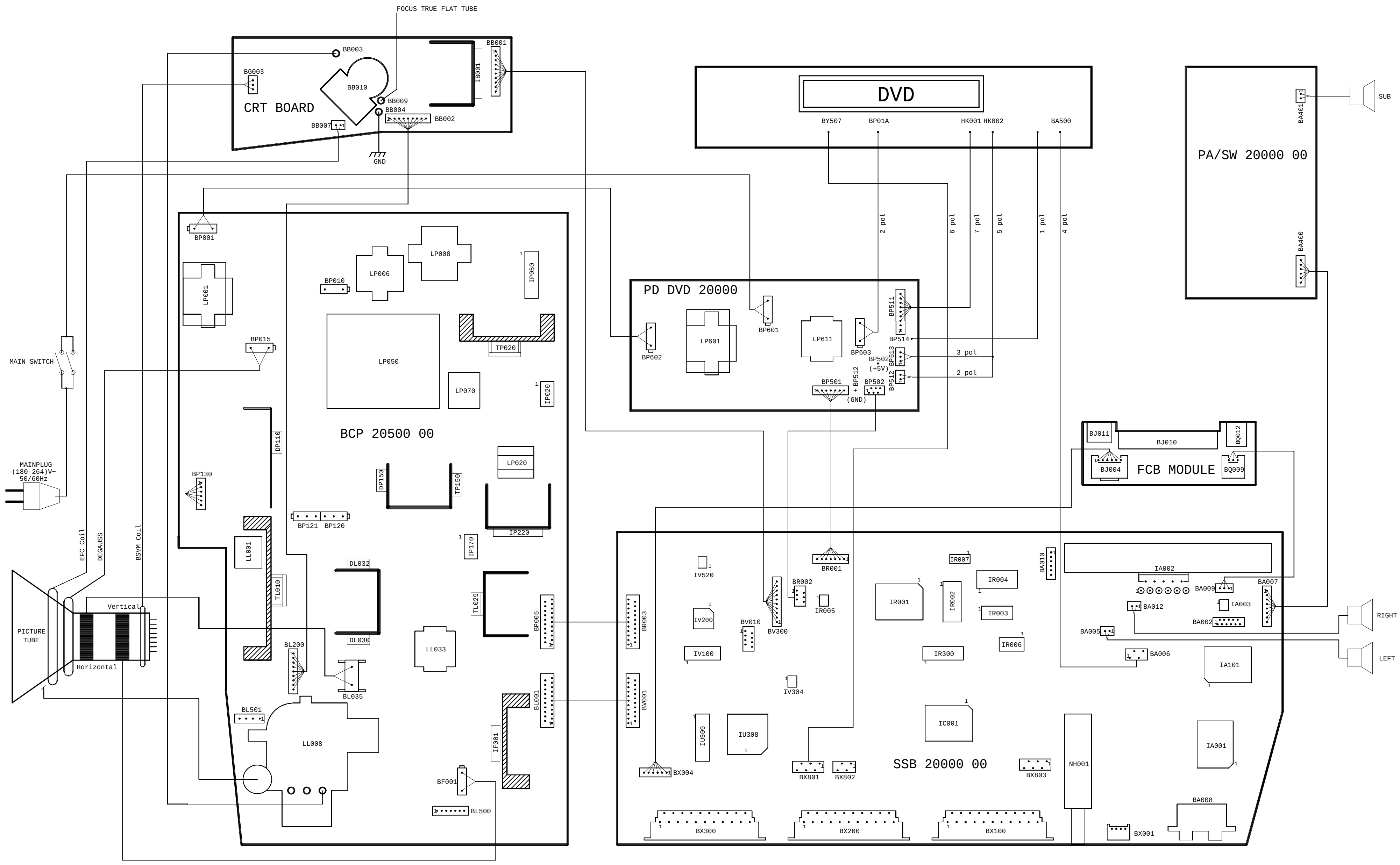
FOCUS TRUE FLAT TUBE
CRT BOARD
BB003
BB001
BG003
BB010
IB001
BB009
BB004
BB002
BB007
GND
DVD
BY507
BP01A
HK001
HK002
BA500
PA/SW 20000 00
BA401
SUB
BA400
2 pol
6 pol
7 pol
5 pol
1 pol
4 pol
PD DVD 20000
BP602
LP601
BP601
LP611
BP603
BP511
BP514
BP513
BP502 (+5V)
3 pol
BP512
2 pol
BP501
BP502
(GND)
BP001
LP001
BP010
LP006
LP008
IP050
LP050
TP020
LP070
IP020
BP015
MAIN SWITCH
BCP 20500 00
DP110
LP020
MAINPLUG (180-264)V~ 50/60Hz
BP130
DP150
TP150
BP121
BP120
IP220
EFC Coil
DEGAUSS
BSVM Coil
LL001
IP170
DL032
TL010
TL029
PICTURE TUBE
Vertical
Horizontal
LL033
BP005
DL030
BL200
BL035
BL501
LL008
BL001
IF001
BF001
BL500
BJ011
BJ010
BQ012
BJ004
FCB MODULE
BQ009
BR001
IR007
BA010
IV520
IR004
BR002
IA002
BA009
BA007
IR001
IR002
IV200
IR005
BA012
IA003
BV010
BR003
BV300
IR003
RIGHT
BA002
BA005
IV100
IR300
IR006
BA006
LEFT
IV304
IA101
BV001
IC001
IU309
IU308
IA001
NH001
SSB 20000 00
BX004
BX801
BX802
BX803
BA008
BX300
BX200
BX100
BX001

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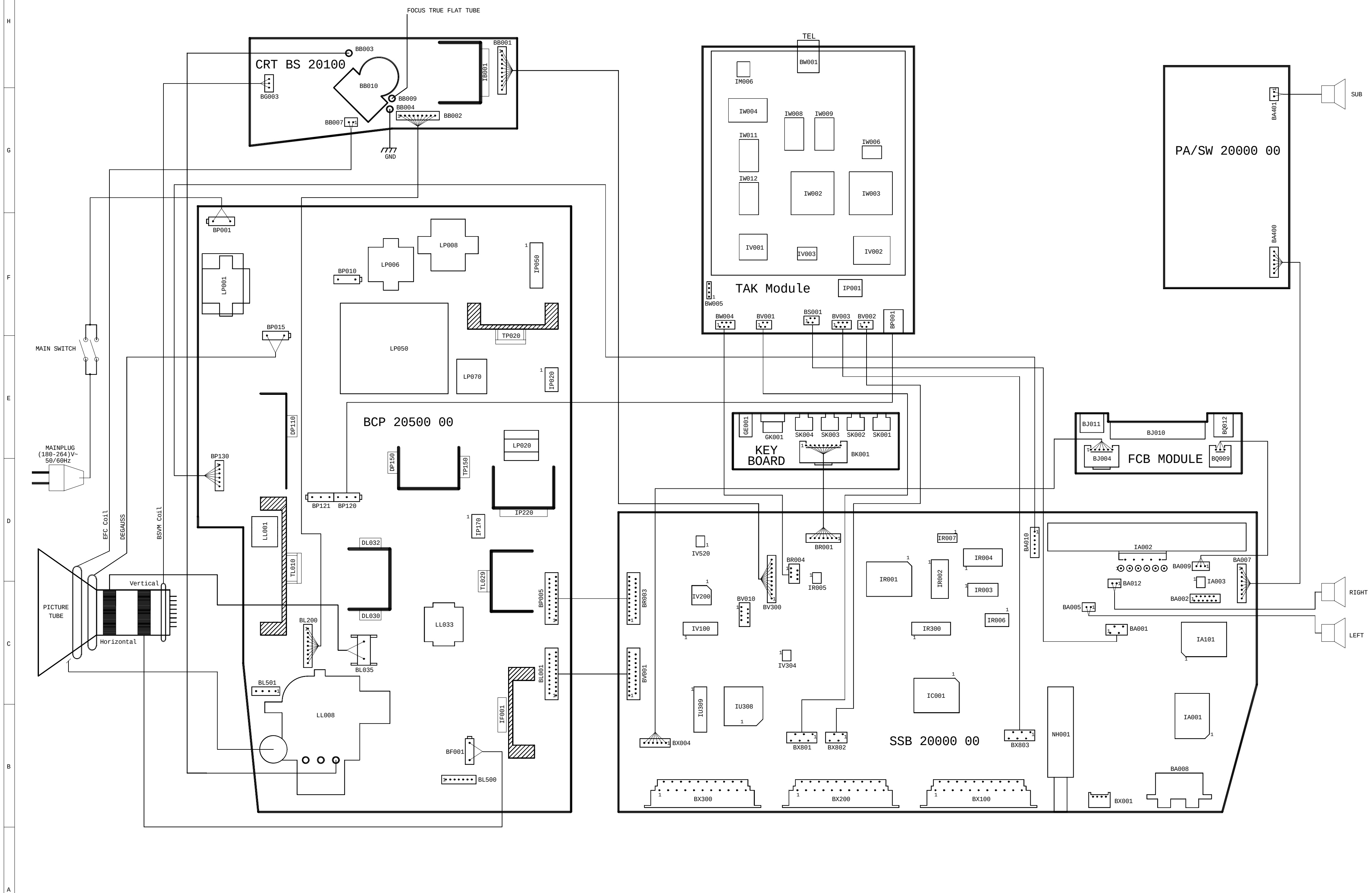
THOMSON MULTIMEDIA tv product development europe P.O.Box 1307 D-78003 Villingen Germany Tel (49) 7721/85 03 Fax (49) 7721/852231	INDEX	DATE	NAME	DESCRIPTION	DRAWN	DESIGNATION	TOCOM-NUMBER	TV
DEVELOPMENT DEPT: CAT_DUFFNER	A	03.05.00	J.David	CORRECTION	ON: 14-03-00 BY: J.David CHECKED ON: BY:	ICC20_DVD_WIRING_DIAGRAM	10684580	IC20 PAGE: 1 OF : 2

PCAD FORMAT DIN A1


FOCUS TRUE FLAT TUBE
CRT BS 20100
BB003
BB001
IB001
BB010
BB009
BB004
BB002
BB007
BG003
GND
TEL
BW001
IM006
IW004
IW008
IW009
IW011
IW006
IW012
IW002
IW003
IV001
IV003
IV002
TAK Module
IP001
BW005
BW004
BV001
BS001
BV003
BV002
BP001
PA/SW 20000 00
BA401
BA400
SUB
BP001
LP001
LP008
LP006
BP010
IP050
LP050
TP020
LP070
IP020
BP015
MAIN SWITCH
DP110
BCP 20500 00
MAINPLUG
(180-264)V~
50/60Hz
BP130
DP150
TP150
LP020
BP121
BP120
IP220
IP170
EFC Coil
DEGAUSS
BSVM Coil
LL001
TL010
DL032
DL030
TL029
BP005
LL033
PICTURE
TUBE
Vertical
Horizontal
BL200
BL035
BL501
LL008
IF001
BL001
BF001
BL500
GE001
GK001
SK004
SK003
SK002
SK001
KEY
BOARD
BK001
BJ011
BJ010
BQ012
BJ004
FCB MODULE
BQ009
BR001
BA010
IR007
IR004
IA002
IV520
BR004
IR001
IR002
BA009
BA007
BR003
IR005
IR003
BA012
IA003
IV200
BV010
BV300
BA002
RIGHT
BA005
IR006
IV100
IR300
BA001
IA101
LEFT
BV001
IV304
IC001
IU309
IU308
NH001
IA001
BX004
BX801
BX802
SSB 20000 00
BX803
BA008
BX300
BX200
BX100
BX001

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Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CAT_DUFFNER

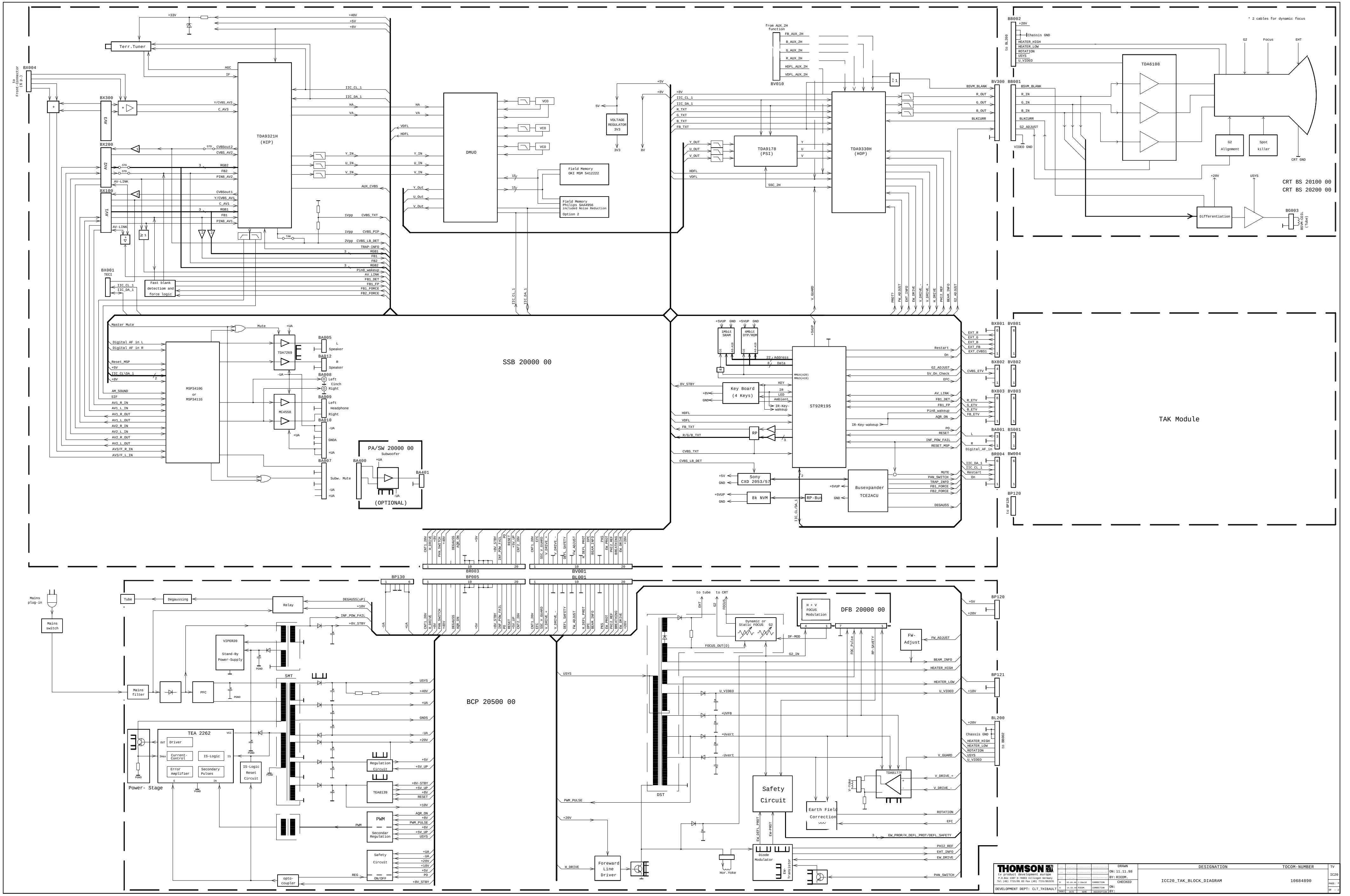
INDEX	DATE	NAME	DESCRIPTION
...	.._..._..	....	....
...	.._..._..	....	....
...	.._..._..	....	....
B	03.05.00	J.David	CORRECTION
A	14-03-00	J.David	....

DRAWN
ON: 22.02.00
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER	TV
ICC20_TAK_WIRING_DIAGRAM	10684890	IC20

PAGE: 1
OF : 2

PCAD FORMAT DIN A1


SSB 20000 00
BCP 20500 00
TAK Module
CRT BS 20100 00
CRT BS 20200 00
PA/SW 20000 00
Subwoofer
(OPTIONAL)
DFB 20000 00
H + V FOCUS Modulation
Terr.Tuner
TDA9321H (HIP)
DMUO
VCO
Field Memory OKI MSM 5412222
Field Memory Philips SAA4956 included Noise Reduction
Option 2
VOLTAGE REGULATOR 3V3
TDA9178 (PSI)
TDA9330H (HOP)
TDA6108
G2 Alignment
Spot killer
Differentiation
* 2 cables for dynamic focus
G2
Focus
EHT
from AUX_2H function
BX004
to Front-Connector (6 p.)
BX300
AV3
BX200
AV2
BX100
AV1
BX001
TECI
Fast blank detection and force logic
MSP3410G or MSP3411G
TDA7269
MC4558
BA005
L Speaker
BA012
R Speaker
BA008
Left Cinch Right
BA009
Left Headphone Right
BA010
BA007
Subw. Mute
BA400
BA401
Mute
Master Mute
Key Board (4 Keys)
1Mbit SRAM
4Mbit OTP/ROM
ST92R195
RP
Sony CXD 2053/57
8k NVM
RP-Bus
Busexpander TCE2ACU
BX801
BV801
BX802
BV802
BX803
BV803
BA001
BS001
BR004
BW004
BP120
to BP120
BB002
to BL200
BV300
BB001
BG003
BSVM-COIL (Tube)
BP130
BR003
BP005
BV001
BL001
Mains plug-in
Mains switch
Tube
Degaussing
Relay
VIPER20
Stand-By Power-Supply
SMT
Mains filter
PFC
TEA 2262
Driver
Current-Control
IS-Logic
Error Amplifier
Secondary Pulses
IS-Logic Reset Circuit
Power- Stage
Regulation Circuit
TEA8139
PWM
Secondar Regulation
Safety Circuit
ON/OFF
opto-coupler
Foreward Line Driver
DST
Hor.Yoke
Diode Modulator
Safety Circuit
Earth Field Correction
TDA8177F
Dynamic or Static FOCUS
FW-Adjust
BP121
BL200
to BB002
to tube
to CRT
V-Yoke

THOMSON MULTIMEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231
DEVELOPMENT DEPT: CLT_THIBAULT

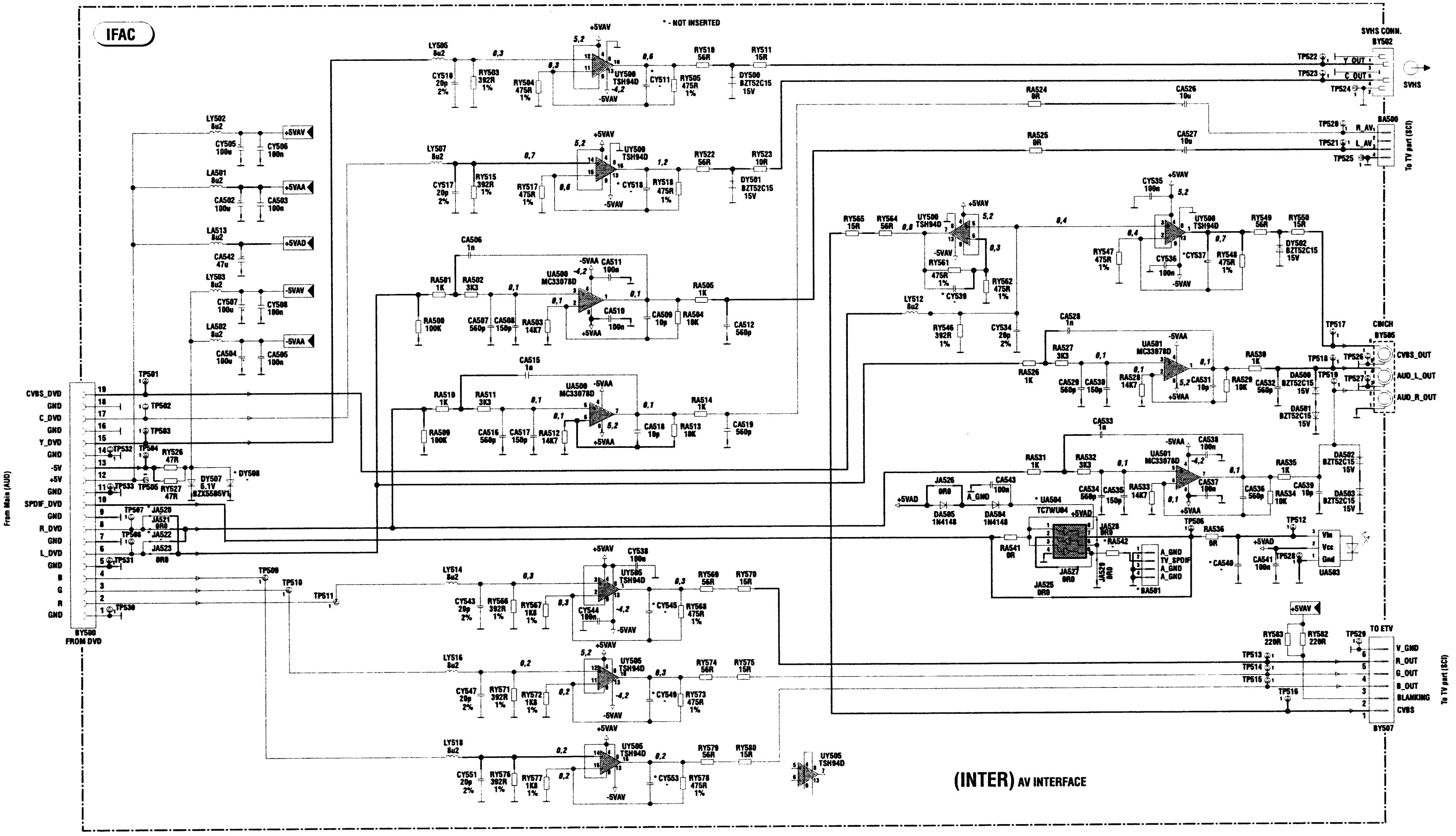
INDEX	DATE	NAME	DESCRIPTION
B	03.05.00	J.David	CORRECTION
A	15.03.99	RIEDM.	CORRECTION

DRAWN
ON: 11.11.98
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER	TV
ICC20_TAK_BLOCK_DIAGRAM	10684890	IC20

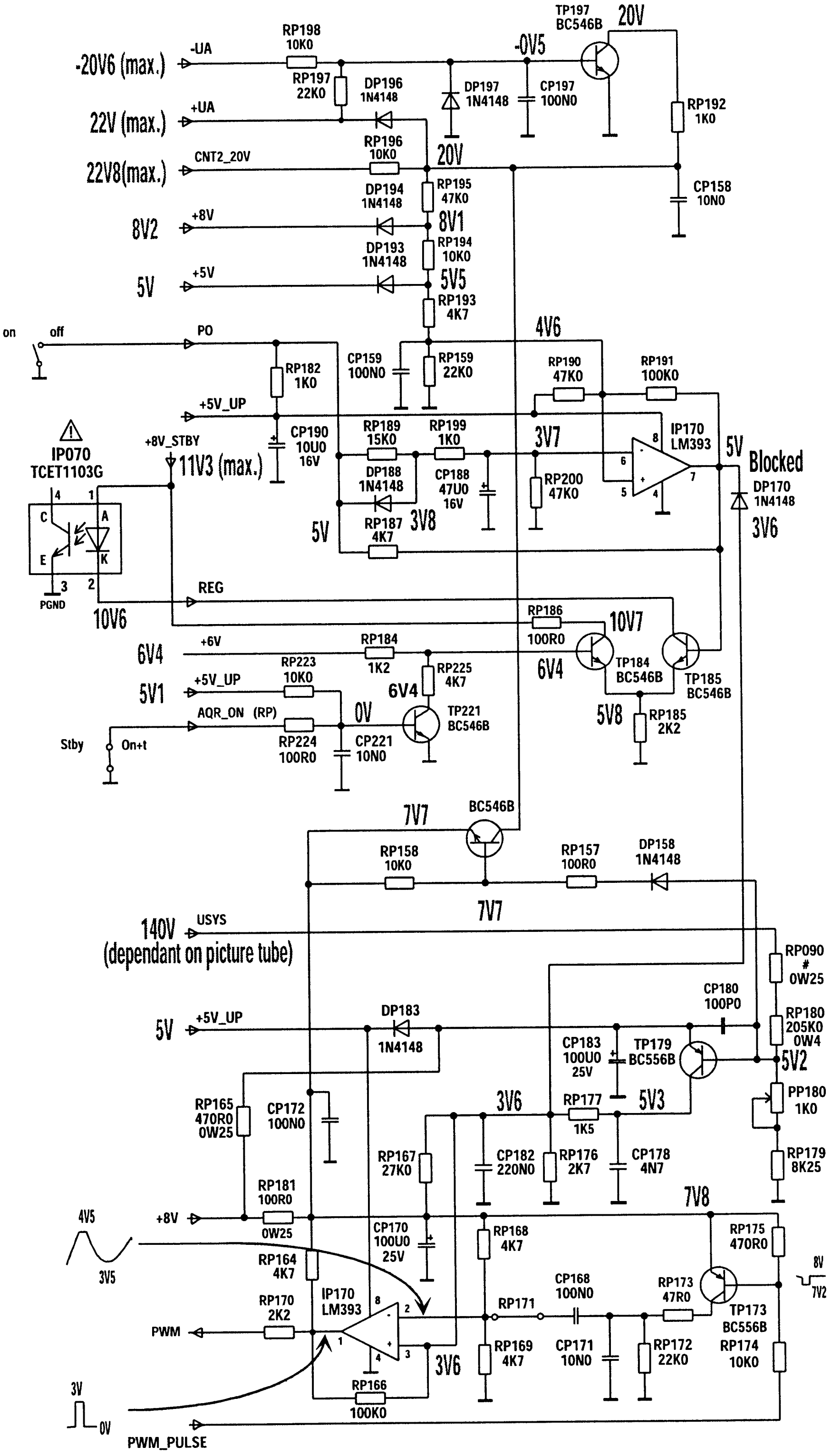
PAGE: 2
OF : 2

AV INTERFACE SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE INTERFACE AV - SCHALTBILD INTERFACE AV - SCHEMA DEI CIRCUITI INTERFACE AV - ESQUEMA DE LOS CIRCUITOS INTERFACE AV


IFAC
* - NOT INSERTED
(INTER) AV INTERFACE
From Main (AUD)
BY500
FROM DVD
CVBS_DVD
GND
C_DVD
GND
Y_DVD
GND
-5V
+5V
GND
SPDIF_DVD
GND
R_DVD
GND
L_DVD
GND
B
G
R
GND
+5VAV
+5VAA
+5VAD
-5VAV
-5VAA
LY502 8u2
CY505 100u
CY506 100n
LA501 8u2
CA502 100u
CA503 100n
LA513 8u2
CA542 47u
LY503 8u2
CY507 100u
CY508 100n
LA502 8u2
CA504 100u
CA505 100n
TP501
TP502
TP503
TP504
TP505
TP532
TP533
RY526 47R
RY527 47R
DY507 5.1V BZX5585V1
* DY508
TP507
TP508
TP530
TP531
JA520
JA521 0R0
JA522
JA523 0R0
LY505 8u2
CY510 20p 2%
RY503 392R 1%
RY504 475R 1%
UY500 TSH94D
CY511
RY505 475R 1%
RY510 56R
RY511 15R
DY500 BZT52C15 15V
LY507 8u2
CY517 20p 2%
RY515 392R 1%
RY517 475R 1%
CY518
RY518 475R 1%
RY522 56R
RY523 10R
DY501 BZT52C15 15V
SVHS CONN.
BY502
TP522
TP523
TP524
Y_OUT
C_OUT
SVHS
RA524 0R
CA526 10u
RA525 0R
CA527 10u
BA500
TP520
TP521
TP525
R_AV
L_AV
To TV part (SCI)
CA506 1n
RA501 1K
RA502 3K3
UA500 MC33078D
CA511 100n
RA500 100K
CA507 560p
CA508 150p
RA503 14K7
CA510 100n
CA509 10p
RA504 10K
RA505 1K
CA512 560p
CA515 1n
RA510 1K
RA511 3K3
RA509 100K
CA516 560p
CA517 150p
RA512 14K7
CA518 10p
RA513 10K
RA514 1K
CA519 560p
RY565 15R
RY564 56R
RY561 475R 1%
CY539
RY562 475R 1%
LY512 8u2
RY546 392R 1%
CY534 20p 2%
CY535 100n
RY547 475R 1%
CY536 100n
CY537
RY548 475R 1%
RY549 56R
RY550 15R
DY502 BZT52C15 15V
CA528 1n
RA527 3K3
RA526 1K
UA501 MC33078D
CA529 560p
CA530 150p
RA528 14K7
CA531 10p
RA529 10K
RA530 1K
CA532 560p
DA500 BZT52C15 15V
DA501 BZT52C15 15V
TP517
TP518
TP519
TP526
TP527
CINCH
BY505
CVBS_OUT
AUD_L_OUT
AUD_R_OUT
CA533 1n
RA531 1K
RA532 3K3
CA538 100n
CA534 560p
CA535 150p
RA533 14K7
CA537 100n
CA536 560p
RA534 10K
RA535 1K
CA539 10p
DA502 BZT52C15 15V
DA503 BZT52C15 15V
JA526 0R0
CA543 100n
A_GND
* UA504
TC7WU04
DA505 1N4148
DA504 1N4148
RA541 0R
JA527 0R0
JA525 0R0
JA528 0R0
JA529 0R0
* RA542
A_GND
TV_SPDIF
A_GND
A_GND
* BA501
TP506
RA536 0R
* CA540
CA541 100n
TP512
TP528
UA503
Vin
Vcc
Gnd
TP509
TP510
TP511
LY514 8u2
CY543 20p 2%
RY566 392R 1%
RY567 1K8 1%
CY538 100n
CY544 100n
UY506 TSH94D
CY545
RY568 475R 1%
RY569 56R
RY570 15R
LY516 8u2
CY547 20p 2%
RY571 392R 1%
RY572 1K8 1%
UY505 TSH94D
CY549
RY573 475R 1%
RY574 56R
RY575 15R
LY518 8u2
CY551 20p 2%
RY576 392R 1%
RY577 1K8 1%
CY553
RY578 475R 1%
RY579 56R
RY580 15R
RY583 220R
RY582 220R
TP529
TP513
TP514
TP515
TP516
TO ETV
V_GND
R_OUT
G_OUT
B_OUT
BLANKING
CVBS
BY507

SECONDARY SAFETY VOLTAGES MEASUREMENTS

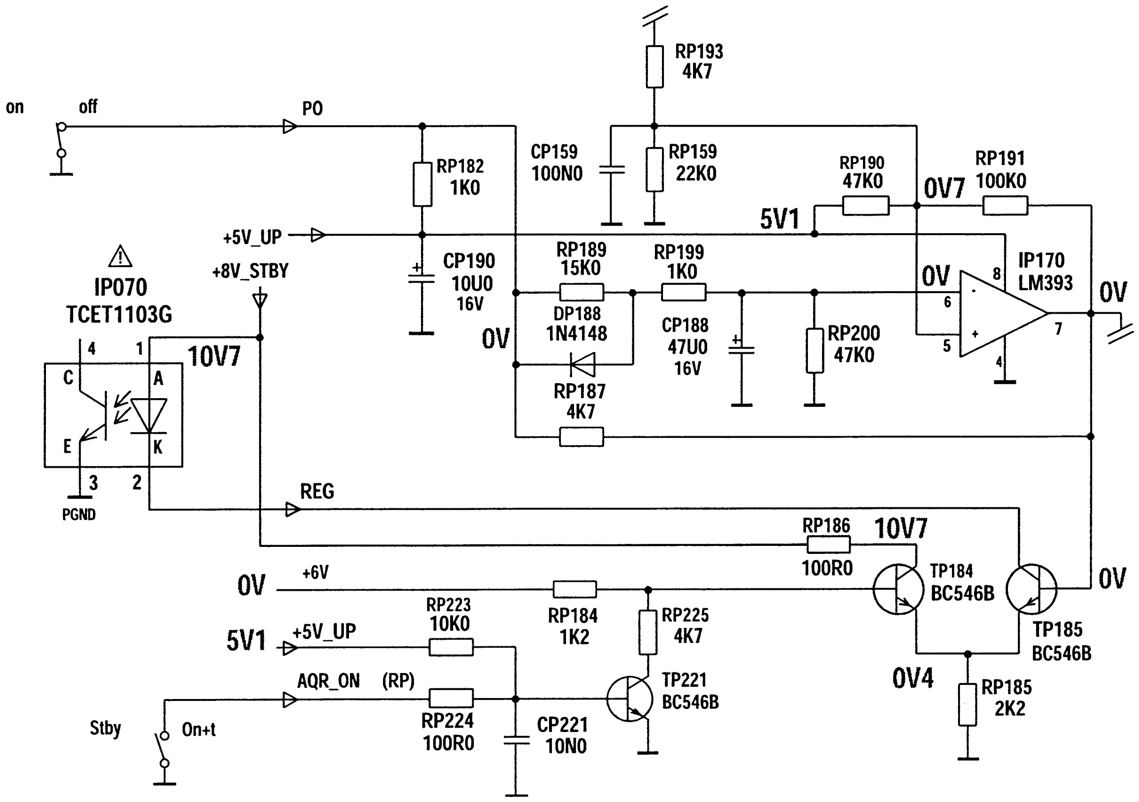
ON MODE



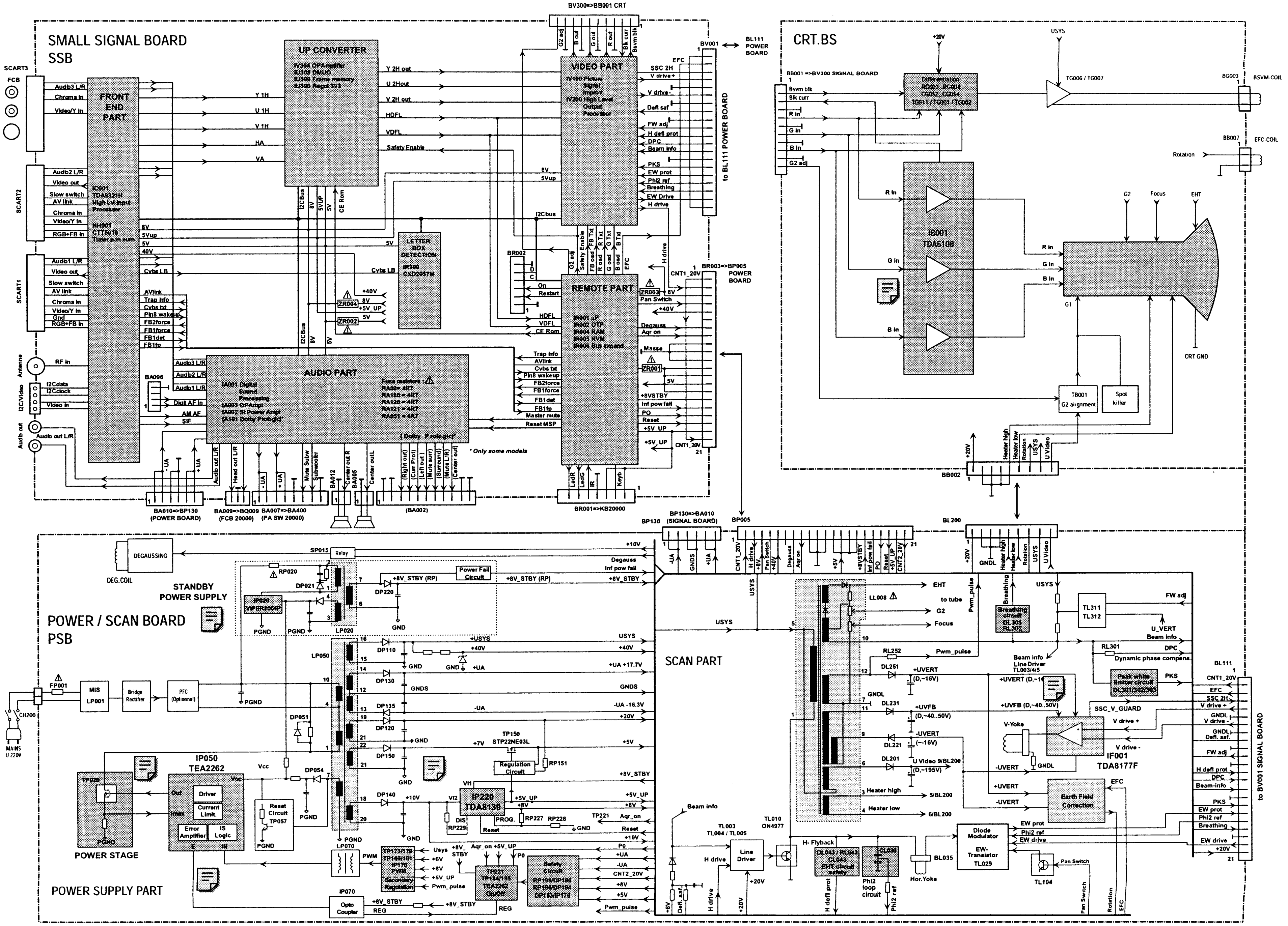
TP197
BC546B
20V
-20V6 (max.)
-UA
RP198
10K0
-0V5
RP197
22K0
DP196
1N4148
DP197
1N4148
CP197
100N0
RP192
1K0
22V (max.)
+UA
22V8(max.)
CNT2_20V
RP196
10K0
20V
CP158
10N0
DP194
1N4148
RP195
47K0
8V2
+8V
8V1
DP193
1N4148
RP194
10K0
5V
+5V
5V5
RP193
4K7
on
off
PO
4V6
CP159
100N0
RP159
22K0
RP182
1K0
RP190
47K0
RP191
100K0
+5V_UP
IP070
TCET1103G
+8V_STBY
11V3 (max.)
CP190
10U0
16V
RP189
15K0
RP199
1K0
3V7
IP170
LM393
5V
Blocked
DP188
1N4148
CP188
47U0
16V
RP200
47K0
DP170
1N4148
3V6
5V
RP187
4K7
3V8
C
E
A
K
PGND
REG
10V6
RP186
100R0
10V7
6V4
+6V
RP184
1K2
RP225
4K7
6V4
TP184
BC546B
TP185
BC546B
5V1
+5V_UP
RP223
10K0
6V4
TP221
BC546B
5V8
RP185
2K2
Stby
On+t
AQR_ON (RP)
RP224
100R0
0V
CP221
10N0
7V7
BC546B
RP158
10K0
RP157
100R0
DP158
1N4148
7V7
140V
USYS
(dependant on picture tube)
RP090
#
0W25
5V
+5V_UP
DP183
1N4148
CP180
100P0
RP180
205K0
0W4
CP183
100U0
25V
TP179
BC556B
5V2
PP180
1K0
RP165
470R0
0W25
CP172
100N0
3V6
RP177
1K5
5V3
RP167
27K0
CP182
220N0
RP176
2K7
CP178
4N7
RP179
8K25
7V8
4V5
3V5
+8V
RP181
100R0
0W25
CP170
100U0
25V
RP168
4K7
RP175
470R0
8V
7V2
RP164
4K7
RP170
2K2
IP170
LM393
RP171
CP168
100N0
RP173
47R0
TP173
BC556B
PWM
RP169
4K7
CP171
10N0
RP172
22K0
RP174
10K0
3V6
RP166
100K0
3V
0V
PWM_PULSE

SECONDARY SAFETY VOLTAGES MEASUREMENTS

STANDBY MODE


RP193
4K7
on
off
PO
RP182
1K0
CP159
100N0
RP159
22K0
RP190
47K0
RP191
100K0
0V7
5V1
+5V_UP
+8V_STBY
IP070
TCET1103G
CP190
10U0
16V
RP189
15K0
RP199
1K0
0V
IP170
LM393
0V
DP188
1N4148
0V
CP188
47U0
16V
RP200
47K0
10V7
4
1
C
A
E
K
3
2
PGND
RP187
4K7
8
6
5
4
7
REG
RP186
100R0
10V7
TP184
BC546B
0V
+6V
RP184
1K2
RP225
4K7
0V
TP185
BC546B
RP223
10K0
5V1
+5V_UP
AQR_ON
(RP)
RP224
100R0
TP221
BC546B
CP221
10N0
0V4
RP185
2K2
Stby
On+t

BLOCK DIAGRAM - SCHEMA SYNOPTIQUE - BLOCKSCHALTBILD - SCHEMA A BLOCCHI - ESQUEMA DE BLOQUES


BV300=>BB001 CRT
SMALL SIGNAL BOARD
SSB
SCART3
FCB
SCART2
SCART1
Antenna
I2C/Video
Audio out
FRONT END PART
IC001 TDA9321H High Lvl Input Processor
NH001 CTT5010 Tuner pan euro
UP CONVERTER
IV304 OPAmplifier
IU308 DMUO
IU306 Frame memory
IU390 Regul 3V3
VIDEO PART
IV100 Picture Signal Improv
IV200 High Level Output Processor
LETTER BOX DETECTION
IR300 CXD2057M
REMOTE PART
IR001 µP
IR002 OTP
IR004 RAM
IR005 NVM
IR006 Bus expand
AUDIO PART
IA001 Digital Sound Processing
IA003 OPAmpl
IA002 St Power Ampl
(A101 Dolby Prologic)*
Fuse resistors:
RA80= 4R7
RA150= 4R7
RA120= 4R7
RA121= 4R7
RA051= 4R7
(Dolby Prologic)*
* Only some models
BV001
BL111 POWER BOARD
to BL111 POWER BOARD
BR002
BR003=>BP005 POWER BOARD
BA006
BA010=>BP130 (POWER BOARD)
BA009=>BQ009 (FCB 20000)
BA007=>BA400 (PA SW 20000)
BA012
BA005
(BA002)
BR001=>KB20000
CRT.BS
BB001 =>BV300 SIGNAL BOARD
Differentiation RG002..RG004 CG052..CG054 TG011 / TG001 / TG002
TG006 / TG007
BG003
BSVM COIL
BB007
EFC COIL
Rotation
IB001 TDA6108
R In
G In
B In
G2
Focus
EHT
G1
CRT GND
TB001 G2 alignment
Spot killer
BB002
BP130 (SIGNAL BOARD)
BP130=>BA010
BP005
BL200
POWER / SCAN BOARD
PSB
DEGAUSSING
DEG.COIL
SP015
Relay
STANDBY POWER SUPPLY
IP020 VIPER20DIP
LP020
Power Fail Circuit
MAINS U 220V
CH200
FP001
MIS LP001
Bridge Rectifier
PFC (Optional)
LP050
IP050 TEA2262
Driver
Current Limit.
Error Amplifier
IS Logic
Reset Circuit TP057
POWER STAGE
TP020
POWER SUPPLY PART
LP070
TP173/179 TP160/181 IP170 PWM Secondary Regulation
TP231 TP184/185 TEA2262 On/Off
Safety Circuit RP198/DP198 RP196/DP194 DP183/IP178
IP070 Opto Coupler
TP150 STP22NE03L
Regulation Circuit
IP220 TDA8139
SCAN PART
LL008
to tube
Breathing circuit DL303 RL302
TL311 TL312
Beam info Line Driver TL003/4/5
Peak white limiter circuit DL301/302/303
V-Yoke
IF001 TDA8177F
Earth Field Correction
Line Driver
TL003 / TL004 / TL005
TL010 ON4977
H- Flyback
DL043 / RL043 CL043 EHT circuit safety
CL030
Phi2 loop circuit
BL035
Hor.Yoke
Diode Modulator
EW-Transistor TL029
TL104
Pan Switch
to BV001 SIGNAL BOARD

ICC20

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